Performance Outcomes GUIDE

DEFENSE ACQUISITION UNIVERSITY

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Naval Center for Acquisition Training

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Introduction

The Defense Acquisition University Performance Outcomes Guide provides course performance outcomes, the college-level course equivalency questionnaire and DAU checklist. Academic institutions may use this guide and the DAU Course Catalog as resources to conduct a side-by-side analysis of courses to be considered for course equivalency.

ACQ 101	Fundamentals of Systems Acquisition Management

Terminal Learning Objectives/Competencies:

1. Given a lecture, discussion, and student materials, you should be able to recognize the working provisions of the Defense Acquisition Workforce Improvement Act (DAWIA), and how it applies to you as a Defense Acquisition professional.
2. Given a lecture and student materials, you should be able to recognize the principles of Acquisition Management, its basic activities and policies/policy makers/guiding regulations, and its principle relationship in risk management.
3. Given a lecture and interactive group caselets, you should be able to recognize the nature of group interaction, its principal phases, and show if it affects teams in arriving at better solutions.
4. Given a lecture and student materials, you should be able to recognize that the Requirements Generation process is antecedent to the Acquisition Management process, is integral to all activities in developing defense systems, and is the key driver of new defense acquisition programs.
5. Given a lecture, class exercise, and student materials, you should be able to recognize the inherent power of a well-designed Work Breakdown Structure (WBS) and its application throughout the Defense Acquisition Process.
6. Given a lecture and student materials, the student should be able to recognize the need for the four basic cost estimating techniques and how these fit in the acquisition life-cycle.
7. Given a lecture and student materials, the student should be able to recognize the development process of the DoD budget and its resource allocation and decision making role in defense acquisition management.
8. Given a lecture and student materials, the student should be able to recognize the funds allocation process, the precepts of the "life-span" of government funds, and the rules associated with different appropriations and two laws associated with the execution of DoD budgets.
9. Given a lecture and the student materials, you should be able to recognize why and how DoD uses contracts to acquire needed supplies and services, the legal nature of contracts, their preparation process, and different contracts and solicitations used based on the program risk equation.
10. Given a lecture and the student materials, you should be able to recognize the Proposal, Preparation, Formal Source Selection, and Contract Award processes and each process's interrelationship.
11. Given a lecture and the student materials, you should be able to describe the role of contract administration, in particular Defense Contract Management Command (DCMC), the Defense Contract Audit Agency (DCAA), the Defense Finance and Accounting Service (DFAS), the need for a formal contract amendment process, prime-subcontractor relationships, and the impact of unauthorized contract changes.

ACQ 101	Fundamentals of Systems Acquisition Management

Terminal Learning Objectives/Competencies, continued:

12. Given classroom instruction , group discussions, and exercises, student will be able to recognize the value and benefits of EVM in the acquisition process.
13. Given a lecture and the student materials, you should be able to recognize the integrated nature of technical management in the defense environment, how we use it in translating broad operational requirements to system specific requirements, and seven "branches" of the discipline.
14. Given a lecture and the student materials, you should be able to recognize the DoD 5000 defined process for evolving from operational requirements to systems specific and the major goals of this process.
15. Given a lecture and the student materials, you should be able to recognize the responsibilities involved in the development process and the need for a sound configuration management process.
16. Given a lecture and the student materials, you should be able to recognize the need for control tools and some of the basic tools used in managing/controlling the development process.
17. Given a lecture and the student materials, you should be able to recognize the state of U.S. technological capacity, the role and planned evolution of science and technology and how they are applicable to the different phases of defense acquisition.
18. Given a lecture and student materials, you should be able to recognize the different types of Test and Evaluation (T&E), the organizations responsible for each, the reason for the heavy DoD commitment to T&E, T&E planning, and its function as the essential feedback mechanism for the development process.
19. Given a lecture and student materials, you should be able to recognize the importance of supportability and the 10 support elements.
20. Given a lecture and the student materials, you should be able to recognize the integral nature of systems software in modern defense systems and the policies applicable to software intensive systems.
21. Given a lecture and the student materials, you should be able to recognize the complexity of software development, its integral nature to the SEP, and top-level "best practices" for a successful software development.
22. Given a lecture and student materials, you should be able to recognize the major Producibility goals of the design effort, and the DoD quality process which translates a released design to a producible product.
23. Given a lecture, discussion, and workshop, you should be able to select appropriate tools from the "toolbox" available for the management of the technical aspects of defense acquisition.

ACQ 101	Fundamentals of Systems Acquisition Management

Terminal Learning Objectives/Competencies, continued:

24. Given a lecture and the student materials, you should be able to identify the changing nature of the defense acquisition process, the new philosophy of acquisition and its premier tools. Given a lecture, student materials, and interactive group discussion/presentations, you should be able to summarize the discrete goals of each phases of a traditional acquisition, the general phasing of different activities, and the focus of the different acquisition disciplines in each of the phases.
25. Given a lecture, student materials, and interactive group discussion/presentations, you should be able to summarize the discrete goals of each phase *[concept exploration; program definition and risk; engineering and manufacturing development; and production/fielding, deployment and operational support]* of a traditional acquisition, the general phasing of different activities, and the focus of the different acquisition disciplines in each of the phases.
26. Given preceding lectures and case studies/discussions, you should be able to construct an acquisition strategy based on different risk profiles, working as an IPT member.

ACQ 201	Intermediate Systems Acquisition Management

Terminal Learning Objectives/Competencies:

1. Given choices, compare and contrast, in the changing DoD environment, the impacts of major institutional players, acquisition reform initiatives and policies on defense systems acquisition management
2. Given a scenario, summarize the requirements generation system and procedures leading to a potential new start or modification.
3. Given a scenario, distinguish the purpose and key activities of each phase of the life cycle process.
4. Given a scenario, relate the role of science and technology activities to the systems acquisition process.
5. Given choices, determine how environmental, safety, and health policies relate to the acquisition process.
6. Recognize the relationship between the various topics comprising the financial management process and the system acquisition management process.
7. Apply funding policies associated with five primary appropriation categories in order to translate cost estimates to acquisition program budgets.
8. Identify the various policies, procedures and events of the Planning, Programming and Budgeting System (PPBS) at the Service Headquarters and OSD level.
9. Summarize the role and function of Congress in development and approval of the DoD authorization and appropriation acts.
10. Identify the terms, procedures, rules and public laws associated with the execution of DoD budgets.
11. Given a scenario, apply the Integrated Product & Process Development (IPPD) concepts and processes necessary to effectively lead and participate in an Integrated Product Team (IPT).
12. Given a critical incident, apply qualitative and quantitative tools to support problem solving and decision making in an acquisition environment.
13. Given an acquisition scenario, apply alternative ethical decision making approaches to aid in resolving a dilemma.
14. Given a lecture and discussion, summarize acquisition program planning, control, and risk management processes.
15. Given an example, identify the role of systems engineering and its associated planning activities in transforming a validated requirement into an affordable, operational system.
16. Given an acquisition scenario within an IPT environment, develop and present the outputs of the systems engineering process steps.

ACQ 201	Intermediate Systems Acquisition Management

Terminal Learning Objectives/Competencies, continued:

17. Given a scenario, identify the purpose and timing of the SE Process outputs over the lifecycle such as program-unique specifications, AIS architectures, technical data packages and other system specific information.
18. Given an acquisition scenario within the IPPD environment, develop and present the outputs of the systems engineering process steps.
19. Given an example, identify the roles that Work Breakdown Structure (WBS), technical performance measurements, trade studies, and modeling and simulation play in the systems engineering process throughout the acquisition lifecycle.
20. Given a scenario, identify the role and functions of configuration management in the acquisition process.
21. Given an acquisition life cycle scenario, summarize the changing government and contractor management roles regarding technical reviews in an IPPD environment.
22. Given choices, identify the T&E process, and its role and contributions within the systems engineering and acquisition process during the acquisition life cycle
23. Given choices, identify the fundamental roles of Developmental Test and Evaluation in the acquisition life cycle.
24. Given choices, identify the role of Operational Test and Evaluation in the acquisition life cycle.
25. Given choices, recognize how the TEMP is used as an integrating document, supporting the acquisition strategy throughout the entire acquisition life cycle.
26. Given choices, summarize how T&E Planning and Execution support the acquisition strategy.
27. Given scenarios, identify acquisition logistics activities, their impact, and how they relate with other functional areas within the acquisition life cycle.
28. Given a scenario, summarize acquisition logistics support activities and requirements associated with fielding/deployment and post-production support of a system.
29. Given a case study and questions, assess critical program management and logistics decisions concerning system supportability issues and alternatives that would optimize system design for supportability.
30. Given choices, identify the manufacturing considerations in the systems engineering process throughout the acquisition life cycle.
31. Given choices, identify the major variables and trends encountered in production and how they relate to other functional areas.

ACQ 201	Intermediate Systems Acquisition Management

Terminal Learning Objectives/Competencies, continued:

32. Given descriptions of software acquisition management, and linkages between the policy and technical disciplines in software acquisition management within DOD, identify key software acquisition management activities that occur during the development of a software intensive system. Identify key practices used to assess software developers process maturity levels and best practices that are indicators of mature development organizations.
33. Identify key practices used to assess software developers process maturity levels and best practices that are indicators of mature development organizations.
34. Identify current best practices and metrics in the area of software intensive systems acquisition and development that may be used by the acquirer.
35. Given a scenario, summarize the role of contracting in the acquisition process and the major contractual contributions towards managing program risk.
36. Given choices, identify the process and procedures for preparing a solicitation.
37. Given a source selection scenario, demonstrate the process for conducting a source selection
38. Given a scenario, summarize the process and roles of Integrated Product Team members in the preparation and support of a contract negotiation.
39. Given choices, identify the major contract administration activities.
40. Given choices, relate a contractor's significant financial motivations and constraints to achieve acquisition objectives.
41. Given a scenario, relate key cost accounting terms and concepts to a contractor's cost proposal.
42. Given choices, identify the key elements of Earned Value Management.
43. Given choices, relate the options for application of Earned Value techniques to a contractual situation.
44. Given a practical exercise or choices, recognize the key processes in the development and management of a Performance Measurement Baseline in a program control process.
45. Given a contract situation, appropriate earned value reporting, and selected performance data, appraise the contractor's status applying typical earned value analysis techniques.

AUD 1320	Intermediate Contract Auditing

Terminal Learning Objectives/Competencies:

1. Explain the importance of defining audit objectives and planning the audit.
2. List factors influencing risk assessment and assess high and low audit risk areas.
3. State the importance of Generally Accepted Government Auditing Standards.
4. Explain why auditors need to attend negotiations.
5. Demonstrate negotiation techniques and concepts.
6. List requirements of Form 2000, explain auditor responsibility to defect fraud, and identify common fraud indicators.
7. Relate the purpose and requirements of the Cost Accounting Standards and complete case studies on CAS 401 and accounting changes.
8. Evaluate post award review concepts and complete a case study on price adjustment.
9. Illustrate audit leads and observations.

AUD 4120	Statistical Sampling

Terminal Learning Objectives/Competencies:

1. Define the criteria for a valid statistical sample.
2. Differentiate between variable and attribute sampling.
3. Differentiate between dollar unit and physical unit sampling.
4. Discuss the proper use of judgment in sampling.
5. Choose the proper sample selection method for given examples.
6. Select the appropriate sample sizes of given criteria.
7. Choose the best stratification methods for a specific application.
8. Select sampling objectives.
9. Use the E-Z Quant sampling programs.
10. Judge the usefulness of sample results.

AUD 4230	Graphic, Computational, and Improvement Curve Analysis Techniques

Terminal Learning Objectives/Competencies:

1. Identify audit situations where regression analysis or improvement curves could be applied.
2. Properly use the correct E-Z Quant program output including graphs and statistical measure.
3. Correctly interpret the E-Z Quant program output including graphs and statistical measures.
4. Determine if reliance can be placed upon the analysis and ways to properly improve the analysis.
5. Analyze improvement curve data and identify major irregularities or significant changes in trend data and adjust the data to establish estimates of the contractor's future production cost.

AUD 8560	DCAA Supervisory Skills Workshop

Terminal Learning Objectives/Competencies:

1. Incorporate DCAA's personnel management requirements into personnel actions.
2. Examine the process for assigning and monitoring audit personnel assignments and maintain consistency with the tenets of Situational Leadership.
3. Use the DMT approach to resolve people problems.
4. Design improvements in audit quality while developing auditor competence and commitment.
5. Select key personnel management programs (staffing, training and development, performance appraisal, promotions, and employee relations) in carrying out personnel management functions.

BCF 101	Fundamentals of Cost Analysis

Terminal Learning Objectives/Competencies:

1. Explain the major types of life cycle cost estimates and explain their use in the life cycle management model.
2. Describe the structure of a life cycle cost estimate.
3. Use descriptive statistics to develop and communicate information.
4. Use inferential statistics to estimate population means and perform hypothesis tests.
5. Use appropriate guidance to estimated the effects of inflation on cost estimates.
6. Use regression and correlation to develop cost estimating relationships in linear, power, and exponential forms.
7. Define the learning curve of a historical system.
8. Develop a learning curve for a new system and use it to predict recurring production costs.
9. Describe the purpose and general method of execution of Cost as an Independent Variable (CAIV).
10. Estimate the risk reserve required for a program.
11. Define purpose and the general organization of an AOA.
12. Explain the interaction between life cycle cost estimating and the budgeting process.
13. Evaluate a cost analysis submitted by a private sector firm.
14. Describe the purpose of earned value analysis.
15. Perform the basic calculations of earned value analysis.
16. Explain the definition and purpose of the Economic Analysis Program.
17. Explain the steps involved in performing an Economic Analysis.

BCF 102	Fundamentals of Earned Value Management

Terminal Learning Objectives/Competencies:

1. Assess subjective probabilities to represent uncertain cost elements in a defense acquisition program.
2. Model the cost risk associated with a defense acquisition program.
3. Judge the reasonableness of a cost risk analysis for a defense acquisition program.

BCF 103	Fundamentals of Business Financial Management

Terminal Learning Objectives/Competencies:

1. Given a lecture and discussion, explain the key aspects of policies and procedures related to the management of defense acquisition programs.
2. Given situational information, describe the overall resource allocation process by which DoD estimates, justifies, obtains and uses its financial resources.
3. Define key basic financial management terms.
4. Given situational information, identify the relationship between cost estimating and the remaining aspects of the DoD resource allocation process.
5. Given situational information, identify the significance of cost estimating as it relates to determining resources required by and for DoD acquisition programs.
6. Given situations information, apply appropriate budgeting policies to translate cost estimates into programming and budgeting requirements for defense acquisition systems.
7. Given situational information, explain the budgeting implications of the various aspects of planning for contracting and execution of resultant contracts.
8. Given situational information, explain the Planning Programming and Budgeting System (PPBS) process, to include the relationship of each phase to the systems acquisition process.
9. Given situational information, relate the budget exhibits (i.e., budget justification documentation) prepared by acquisition program offices to the budget review process conducted during the budgeting phase of PPBS.
10. Given situational information, summarize the Congressional enactment process that leads to a budget resolution, Authorization Act and Appropriation Act, and the implications of those process outcomes to defense acquisition programs.
11. Given situational information, explain the process of program budget execution.
12. Given situational information, assess violations of the Misappropriation and Anti-deficiency Acts.
13. Given situational information, apply known applicable laws, directives, policies and procedures to resolve issues concerning selected aspects of the business financial management area involved in defense acquisition management.

BCF 203	Intermediate Earned Value Management

Terminal Learning Objectives/Competencies:

1. Using computer and CDROM disks, a student will be able to summarize information from Acquisition Deskbook, Air Force Acquisition Model, Internet and the Lightweight Reconnaissance Vehicle (LAR) simulation.
2. Using the LAR acquisition documents, a student will be able to synthesize the relationship between the EVM process and the Defense Acquisition Management process.
3. Using the LAR documents, a student will be able to prepare EVM requirements to include in seven sections of the RFP.
4. Using the source selection criteria developed in lesson 3 and the two proposals provided, a student will be able to recommend a contractor for the LAR EMD contract. Describe the EVM Role in the Acquisition Strategy and Planning Process.
5. Given the Increda Management System Description, a student will be able to assess the contractor's proposed EVMS relative to compliance with the 32 EVMS criteria.
6. Using the Increda internal documents and mock CAM interviews, synthesize the planning, organizing, executing, and follow-up of an Integrated Baseline Review.
7. Using experiences from a guest speaker, a student will be able to transfer different perspective to his/her own program situation.
8. Using the LAR Memorandum of Agreement (MOA) and Surveillance Plan, a student will be able to summarize the surveillance responsibilities of the LAR IPT members.
9. Using simulated reporting from Increda and the CDRL requirements generated in lesson 3, a student will be able to assess the initial submittal.
10. Using EVM analysis techniques and automated tools, a student will be able to combine information from the CPR and critical path scheduling tools.
11. Using two years of LAR CPR data, a student should be able to summarize Increda's cost and schedule performance.
12. Using all of the information from the Lesson 11, a student will be able to summarize the health of the contract.

BCF 204	Intermediate Cost Analysis

Terminal Learning Objectives/Competencies:

1. Explain the acquisition milestone process and explain the cost analyst's role and responsibilities in this process.
2. Describe a logical process to be undertaken in the development of a cost mode and comprehend the contribution of each step in the process to the cost model.
3. Perform data collection in support of an estimate.
4. Normalize data for differences in definition, economic year of the dollars, and quantities.
5. Use appropriate inflation indices to inflate/deflate estimates and actuals between constant-year and then-year dollars.
6. Use regression analysis to develop cost estimating relationships in linear, power, and exponential forms.
7. Comprehend the use of transformations in regression analysis.
8. Analyze regression output to determine preferred cost estimating relationships, and interpret what implications the statistics have on the ability to estimate future tasks.
9. Perform residual analysis to determine whether model assumptions are violated. If model assumptions are violated, recommend corrective action, if any.
10. Describe the basic structure and need for cost model documentation.
11. Understand the strengths and weaknesses of the following non-statistical estimating techniques: expert opinion, analogy, cost factors, and wraparound rates.

BCF 204	Intermediate Cost Analysis (Continued)

Terminal Learning Objectives/Competencies:

12. Explain the conditions, which must exist for cost improvement to be possible.
13. Explain the elements of cost improvement.
14. Comprehend the differences between unit and cumulative average cost improvement curves.
15. Develop and use cost improvement curve slopes for unit, cumulative average, rate, and fixed cost models.
16. Estimate cost improvement lost from breaks in production.
17. Analyze a program schedule to determine the appropriate time phasing techniques(s) for the Development, Production, and Operating & Support cost elements.
18. Understand the risk management process in system acquisition.
19. Estimate the risk dollars required to estimate at the mean or other specified confidence levels.
20. Describe the basic structure and need for cost estimate documentation.

BCF 205	Contractor Finance for Acquisition Managers

Terminal Learning Objectives/Competencies:

1. For students to understand a business is a system of cash flows and that money has time value.

2. For students to understand the format and managerial considerations affecting financial statements.

3. For students to understand how financial analysis is used as a basis for evaluating the results of business operations.

4. For students to demonstrate the interrelationship of profitability, efficiency of asset utilization, and other financial ratios.

5. For students to understand the characteristics and appropriate use of various types of contracts.

6. For students to understand the mission and responsibilities of a Contract Administration Office (CAO).

7. For students to understand the process involved in forecasting sales for government contractors and its impact on all other financial planning.

8. For students to understand Cost/Managerial Accounting and how it is used by government contractors.

9. For students to understand cost terminology associated with government contracting and how contractor indirect costs are managed for government contracts.

10. For students to understand how the contractor's mix of fixed and variable costs impacts his profitability and risk.

11. For students to understand contractor's cost estimating process in response to a Request for Proposal.

12. No TLOs given, only assignment for case study

BCF 205	Contractor Finance for Acquisition Managers

Terminal Learning Objectives/Competencies, continued:

13. For students to analyze the impact which changes in business base have on a defense contractor's direct and indirect costs.

14. For students to understand factors affecting investment in capital assets and government concern regarding capital investment by defense contractors.

15. For students to understand the considerations of a contractor in pricing competitive proposals to the DOD and appreciate the importance of the pricing decision and its risk to the proposing contractor.

16. For students to understand the considerations of a contractor in pricing competitive proposals to the DOD and appreciate the importance of the pricing decision and its risk to the proposal contractor.

17. For students to understand the role of profit in DOD contracts.

BCF 206	**Cost Risk Analysis**

Terminal Learning Objectives/Competencies:

1. Assess subjective probabilities to represent uncertain cost elements in a defense acquisition Program.
2. Model the cost risk associated with a defense acquisition program.
3. Judge the reasonableness of a cost risk analysis for a defense acquisition program.

BCF 207	Economic Analysis

Terminal Learning Objectives/Competencies:

1. Explain policies governing economic analysis.
2. Identify the procedures for performing an economic analysis.
3. Apply appropriate techniques to estimate and evaluate benefits for competing alternatives in an economic analysis.
4. Evaluate cost data.
5. Apply appropriate methodologies to estimate costs of competing alternatives in an economic analysis.
6. Rank alternatives based on estimates of benefits and costs.
7. Calculate and interpret economic indicators.
8. Explain sensitivity/risk analysis.
9. Perform sensitivity analysis.
10. Perform an economic analysis.

BCF 208	Software Cost Estimating

Terminal Learning Objectives/Competencies:

1. Describe the software acquisition process in general terms.
2. Determine the most appropriate cost estimating methodology and the types of data required when given a software cost estimate to perform.
3. Use models for software life cycles cost estimating.
4. Compare and contrast alternative techniques.
5. Apply techniques for software cost estimating.
6. Discuss the strengths and weaknesses of a variety of software cost estimating models.
7. Explain the major influences on the software cost estimating process (key players, decision points, concurrent activities, risk, reuse).

BCF 209	Selected Acquisition Report
Terminal Learning Objectives/Competencies: Current terminal and enabling objectives are unavailable at this time.	

BCF 211	**Acquisition Business Management**
Terminal Learning Objectives/Competencies: Current terminal and enabling objectives are unavailable at this time.	

BCF 301	Budget, Cost Estimating and Financial Management Workshop

Terminal Learning Objectives/Competencies:

1. Given a case study at the end of this lesson the student should be able to list at least 5 of the Earned Value elements involved in assessing the cost and schedule status of a contract.
2. Given a teaching note, lecture and discussion, at the end of this lesson the student should be able to explain the process of program budget execution.
3. Given a teaching note, lecture and discussion at the end of this lesson the student should be able to assess violations of the Misappropriation and Anti-deficiency Acts.
4. Given a teaching not, lecture and discussion at the end of this lesson the student should be able to use the budgeting policies for the major appropriations.
5. Given a teaching note, lecture, discussion and at the end of this lesson the student should be able to explain the basic cost estimating categories.
6. Given a teaching not, lecture and discussion at the end of this lesson the student should be able to choose the proper use of life cycle cost terms.
7. Given a teaching note, lecture, discussion and critical incidents, at the end of this lesson the student should be able to identify the cost estimating method that should be used in a given situation.
8. Given a teaching note, lecture and discussion at the end of this lesson the student should be able to explain the Planning, Programming and Budgeting System (PPBS) process.
9. Given a teaching note, lecture and discussion at the end of this lesson the student should be able to express the relationship of each phase of the PPBS process to the systems acquisition process.
10. Given a lecture and discussion, at the end of this lesson the students should be able to summarize the major items reviewed during the OSD/OMB budget hearings.
11. Given a lecture and discussion, at the end of this lesson the student should be able to describe the basic policies for managing defense acquisition programs.
12. Given a case study at the end of this lesson, the student should be able to provide an assessment of the cost and schedule status of a contract using at least 6 Earned Value metrics and/or Estimates At Complete.
13. Given a teaching note, lecture and discussion at the end of this lesson the student should be able to explain the cost estimating process.
14. Given a teaching note, lecture and discussion at the end of this lesson the student should be able to explain the concept of learning curve.
15. Given a teaching note, lecture and discussion, at the end of this lesson the student should be able to explain the budgeting implications of the various aspects of contracting and execution.

BCF 301	Budget, Cost Estimating and Financial Management Workshop

Terminal Learning Objectives/Competencies, continued:

16. Describe and define tasks and duties of BCEFM functions.
17. Be able to define current BCEFM related laws, regulations, policies and procedures
18. Given a teaching note, lecture and discussion, at the end of this lesson the student should be able to summarize the process of Congressional enactment.
19. Given a teaching note, lecture and discussion at the end of this lesson the student should be able to illustrate the programmatic decisions of the Congress.

BCF 802	**Selected Acquisition Report Review**
Terminal Learning Objectives/Competencies: Current terminal and enabling objectives are unavailable at this time.	

CON 101	Fundamentals of Contracting
Terminal Learning Objectives/Competencies	
Course is undergoing a major rewrite. Estimated completion date is 4 July 1998. Terminal and enabling objectives will become available after this date.	

CON 104	**Fundamentals of Contract Pricing**
Terminal Learning Objectives/Competencies Course is undergoing a major rewrite. Estimated completion date is 28 August 1998. Terminal and enabling objectives will be available after this date.	

CON 202	**Intermediate Contracting**
Terminal Learning Objectives/Competencies Course is undergoing a major rewrite. Estimated completion date is	

CON 204	Intermediate Contract Pricing
Terminal Learning Objectives/Competencies Course is undergoing a major rewrite. Estimated completion date is 28 August 1998. Terminal and enabling objectives will become available after this date.	

CON 210	Government Contract Law

Terminal Learning Objectives/Competencies:

1. Discriminate between statutory, regulatory, and ethical restrictions applicable to government contracts.
2. Analyze and determine the manner in which the various pieces of federal legislation and judicial and administrative decisions impact the formation of government contracts.
3. Compare and contrast the different procedures and remedies available to an adversely affected bidder or offeror in the forums available in which to protest a government acquisition.
4. Given different types and forms of property, summarize the government's right in such property and the remedies available to both the government and the contractor resulting from the improper use of such property.
5. Distinguish those situations in which the government has properly and improperly obligated federal monies.
6. Identify actionable fraud and summarize possible options for remedying such conduct.
7. Given different types of contracts, identify and select the government's rights with respect to delivery, and/or any express or implied warranties, and make a determination about when acceptance takes place.
8. Given various situations in which a contractor has performed additional work not required by the original contract (1) differentiate those situations in which the contractor is entitled to an equitable adjustment from those in which the contractor is to, and (2) if so entitled, determine the elements of the equitable adjustment.
9. Provided the facts underlying a pending dispute, propose the probable course of the litigation, to include the nature of government employees' participation in such litigation.
10. Determine the availability of and the circumstances necessary to terminate a government contract, given different factual situations.

CON 232	Overhead Management of Defense Contracts
Terminal Learning Objectives/Competencies: Current terminal and enabling objectives are unavailable at this time.	

CON 233	Cost Accounting Standards Workshop

Terminal Learning Objectives/Competencies:

1. Given a set of circumstances, relevant FAR provisions, and appropriate guidance, analyze CAS provisions and clauses to the solicitation/contract and determine the type of coverage (full or modified).
2. Given a contractor's cost accounting practice, applicable parts of the FAR, authoritative statements by the CAS Board, and regulatory and advisory guidance, determine if the practice is compliant by correctly citing applicable requirements.
3. Given a set of circumstances and contract adjustment provisions in the FAR, determine if a cost impact proposal is necessary and, if so, analyze the cost impact.
4. Given a set of circumstances, determine if and when disclosure is required and the type of information to be provided in the disclosure statement in accordance with FAR disclosure requirements.

CON 234	Contingency Contracting

Terminal Learning Objectives/Competencies:

1. State characteristics of contingency contracting.
2. Identify sources of authority to perform contingency contracting
3. Compare and contrast the various types of contingencies that DoD contracting organizations support.
4. Identify the four phases of contracting support during contingency operations.
5. Identify waivers and deviations authorized in contingencies.
6. Recognize expedited contracting procedures in contingency operations.
7. Compare and contrast US values with other world views and state how world views affect US relations.
8. Identify the affects of a dissimilar culture on behavior and ability to perform assigned tasks.
9. Determine the mission and capabilities of DoD contracting organizations which support contingency operations.
10. Recognize the roles and missions of non-DoD agencies and non-governmental organizations in contingency operations.
11. Identify and discuss joint contingency contracting to include: Command structure from the national level down to the JTF; role of the CINC Acquisition and Contracting Board; differences between operational and contractual authority; key players in a JTF and the CCO's relationship with them.
12. State the most significant differences between U. S. contingency contracting operations and multinational contingency contracting operations.
13. Select the responsibilities of a CCO in a JTF.
14. Compare and contrast the roles, responsibilities and contractual authority (including training requirements) of Oos, CORs, IMPAC card holders, and Class "A" Agents.
15. Identify the automated resources required to optimize contingency contracting operations.
16. Demonstrate familiarity with the automated resources required to optimize contingency contracting operations.
17. Identify and discuss effective anti-terrorism practices necessary for personal security.
18. Identify and discuss effective anti-terrorism practices necessary for travel security.
19. Identify and discuss effective anti-terrorism practices necessary for vehicle security.
20. Identify and discuss effective practices necessary for operation, information, personnel, industrial, and physical security.

CON 234	Contingency Contracting

Terminal Learning Objectives/Competencies Continued:

21. Identify the major elements of the Deliberate Planning Process and discuss how the contracting function is integrated into this process.
22. Recognize the major elements of the Crisis Action Planning Process and discuss how the contracting function is integrated into this process.
23. Determine the Joint Uniform Lesson Learned System (JULLS) and discuss how a CCO would use this system.
24. Describe and discuss the contents of a Contingency Contracting Support Plan (CCSP)]
25. Identify the contents of a typical Contingency Contracting Kit.
26. State the ancillary training and preparation required for a CCO prior to deployment.
27. Discuss how to perform market surveys and market research in deliberate and crisis action planning.
28. Demonstrate ability to identify and use proper procedures for successful Deliberate and Crisis Action Planning Practical Exercise.
29. Identify the key personnel and organizations in a contingency, explain their roles and responsibilities, and illustrate the coordination between them.
30. Identify assets necessary to construct the Contingency Contracting Office.
31. Identify internal control procedures for conducting business within the Contingency Office.
32. Describe the proper use of funds from other U. S. Appropriations.
33. Determine the proper utilization of funds received from foreign countries.
34. Identify the constraints and controls associated with DOD engagement in Humanitarian and Civic Assistance.
35. Demonstrate the proper procedures required for Contract funding.
36. List, identify and properly apply, using automated resources, procurement, instruments available in a contingency environment for purchases below the Simplified Acquisition Threshold.
37. List, identify and prepare reports of procurement actions using automated resources, documents required to support contract instruments.
38. List, identify and properly apply using automated resources, procurement instruments available in a contingency environment for purchases above the Simplified Acquisition Threshold.

CON 234	Contingency Contracting

Terminal Learning Objectives/Competencies Continued:

39. Identify the duties and responsibilities of the personnel involved in contingency contract administration and describe the training each requires to adequately perform contract administration functions.
40. Compare and contrast the types of contract modifications which are used in contingency contracting and their effect on timely performance.
41. Explain the procedures for ratifying unauthorized commitments and definitizing unpriced actions.
42. Explain the procedures used to transfer open contracts and orders to other contracting offices and agencies.
43. Discuss the judgmental ethical, and environmental factors considered when terminating and closing out contracts.
44. Discuss the typical reasons for contractor submission of claims and list the documentation required for negotiation and settlement of modifications, claims and disputes.
45. Describe the record keeping required in administering and closing out contingency contracts and discuss procedures for monitoring the performance of contracting personnel.
46. Identify and apply the principles, procedures, and skills necessary for the establishment of priorities and the conduct of a simulated contingency contracting negotiation.
47. Prepare for and explain correct and procedural team reaction to a real-life contingency scenario and deliver a complete oral exposition of all required actions.

CON 235	Advanced Contract Pricing

Terminal Learning Objectives/Competencies:

1. Recognize, understand and apply market forces that impact the price equation of a commercial item.

2. Understand the importance of historical information to estimating future contract cost/price and learning a systematic methodology for pursuing that information and apply the same principles and procedures to practical contract pricing issues.

3. Given a requirement to estimate the cost/price of a task or service, outline a structured methodology for developing an estimating tool.

4. Develop cost and price objectives using experts in various functional areas.

5. Use the analogy estimating technique to determine the cost/price of a good or service.

6. Develop burdening factors to convert the direct hours to direct costs and to burden the cost in such a way as to arrive at the price.

7. Develop an EAC

8. Given data on a single variable, develop a point estimate and prediction interval for the task that you are estimating. Analyze the strengths and weaknesses of this technique.

9. Given two variables, and using the most appropriate statistical technique, analyze and describe the nature of the relationship between the two variables.

10. Given two variables, and using the most appropriate statistical technique, analyze and describe the nature of the relationship between the two variables.

11. Given multiple explanatory variables and a dependent variable, perform a multiple regression analysis, and defend the analysis and decisions derived from that analysis.

12. Determine when the relationship between two variables may not be linear in unit space, and use the most appropriate statistical technique to analyze and describe the nature of the relationship between the two variables.

13. Quantify the effect that quantity has on cost when we conclude that increasing production

quantities lead to reduction in unit cost. Address the impact that breaks in production have on the cost/quantity relationship	
CON 235	**Advanced Contract Pricing**

Terminal Learning Objectives/Competencies Continued:

14. Given a point estimate, provide the decision maker with information regarding the impact that estimating assumptions have on the estimate.

15. Given decision alternatives, determine the probability associated with the various outcomes.

CON 236	Contractual Aspects of Value Engineering

Terminal Learning Objectives/Competencies:

1. Apply the appropriate VE clause by:

- Differentiating among the types of VE programs,
- Determining applicability of VE clauses
- Inserting the appropriate clause in solicitations/contracts, and
- Notifying the contractor of VE opportunities.

2. Validate VE change proposals by assessing the VE proposals including receipt, evaluation team establishment and application of evaluation criteria and concluding with acceptance or rejection of the contractor's proposal.

3. Calculate savings resulting from accepted VE change proposals including the savings category, actual computation of VE savings shares for the contractor and government and establishment of the appropriate payment process.

4. Modify the contract as appropriate after formal processing and acceptance of the VECP.

CON 243	Architect-Engineer Contracting

Terminal Learning Objectives/Competencies:

1. Given a requirement for architectural or engineering services, **determine if the services require the use of Brooks Act procedures and identify the basic steps necessary to satisfy the requirement**.
2. Given a requirement for architectural or engineering services, **determine if the services require the use of Brooks Act procedures and identify the basic steps necessary to satisfy the requirement**.
3. Given a requirement for architectural or engineering services, **determine if the services require the use of Brooks Act procedures and identify the basic steps necessary to satisfy the requirement**.
4. Given an architect-engineer requirement, which has been advertised, and qualifications statements received, **evaluate the firms and determine the order in which they will be ranked.**
5. Given the circumstance to prepare a Government estimate for architect-engineer work or review an architect-engineer proposal, **determine applicable cost principles specific to A-E contracting.**
6. Given the requirement to contract for architect-engineer services, **recognize when and how a Government cost estimate for the project is developed.**
7. Given an architect-engineer firm's proposal and the Government estimate, **develop a strategy and negotiate the project.**
8. Given a contract, which has been awarded for architect-engineer services, **distinguish how the Government maintains quality assurance on the contract**.
9. Given a contract, which has been awarded for architect-engineer services, **describe the roles and responsibilities of those that manage and administer the contract**.

CON 244	Construction Contracting

Terminal Learning Objectives/Competencies:

1. Given a construction contract requirement to build a new facility, renovate an existing facility, or maintenance of existing facilities, apply the required knowledge of laws, regulations, and procedures to the act of properly issuing and administering a construction contract in accordance with Federal acquisition laws, regulations, Department of Defense supplementation, Agency policies, procedures, and best business practices.

2. Given a construction contract requirement, draft a construction acquisition plan in accordance with FAR Part 7, DFARS Part 207 and agency policies and procedures.

3. Given receipt of a procurement request for a construction contract requirement, draft a procurement plan and perform all tasks associated with issuing a construction IFB/RFP in accordance with FAR Part 14, 15, 36, corresponding DFARs, and agency policies and procedures.

4. Given an Abstract of Bids/Proposals for a construction project, perform all required tasks associated with bid/proposal evaluation (resolving discrepancies, mistakes in bids, making necessary determinations, approval of bonds, any negotiating) and award the construction contract in accordance with procedures described in FAR Part 14, 15, corresponding DFARS, and agency policies and procedures.

5. Given a Construction Contractor's Quality Control (CQC) plan and specifications to review, identify the critical elements of a quality assurance plan for construction in accordance with regulations, statutes, and sound business judgment.

6. Given a construction contract, diagnose, troubleshoot, and determine the applicable construction contract administration (compliance) approach, utilizing FAR Parts 22, 35, DFARS Parts 222, 236, and other DOD planning regulations/guidelines.

7. Given a changed condition on a construction contract, select the appropriate clause and remedy for the situation in accordance with Federal and DOD acquisition laws, regulations, and best business practices.

8. Given a construction contractor's invoices and project completion, verify an invoice for construction progress payments, then conduct contract closeout in accordance with Federal and DOD acquisition laws and regulations.

CON 301	**Executive Contracting**
Terminal Learning Objectives/Competencies: Current terminal and enabling objectives are unavailable at this time.	

CON 333	**Management for Contracting Supervisors**
Terminal Learning Objectives/Competencies: 1. Manage external interactions 2. Plan, execute, and oversee workload. 3. Lead as a contracting professional	

GRT 201	**Grants Management**
Terminal Learning Objectives/Competencies: Course is currently undergoing revision. New objectives are not yet available.	

IND 103	Contract Property Systems Analysis

Terminal Learning Objectives/Competencies:

1. Exhibit the ability to conduct property control system analysis.
2. Identify deficiencies to the Property Control System.
3. Record unsatisfactory conditions uncovered during the analysis.
4. Describe the satisfactory or unsatisfactory status of each functional segment.
5. Write a system analysis summary.
6. Define what is included in a property control system analysis.
7. State when to conduct analysis.
8. List type and objectives of analysis.
9. Identify and brief participants in analysis.
10. Select the proper classes of property for analysis determined by function.
11. List populations of property for data analysis.
12. List functional segments for data analysis.
13. State the adequacy of the sample data.
14. State the use of statistical sampling with selected populations.

IND 102	Contract Property Disposition

Terminal Learning Objectives/Competencies:

1. Examine DoD's policies and procedures on plant clearance in accordance with FAR, DFARS, and DoD Directives.
2. Explain how to apply lotting procedures properly to maximize sale of contractor inventory.
3. Determine method of sale most advantageous to the Government in accordance with FAR and DFARS.
4. Identify the steps in establishing a plant clearance case file in accordance with DFARS 245.71.
5. Explain the duties and responsibilities of the PLCO and the property disposition team in disposing of inventory excess to the needs of the contractor in accordance with FAR and DFARS.
6. Instruct and advise the contractor in the proper preparation of inventory schedules in accordance with FAR and DFARS guidance.
7. Explain what a contractor must do to comply with the precious metals recovery programs in accordance with FAR and DFARS.
8. Define plant clearance terms, and identify the forms to use in a particular situation in accordance with FAR and DFARS.
9. Illustrate DoD's policy concerning ethical behavior in accordance with DoD Directive 5500.7, the Code of Ethics, FAR, and DFARS.
10. Explain the procedure for performing a pre-inventory scrap determination through physical inspection of property in accordance in accordance with FAR and DFARS.
11. Explain how to apply general sales terms and conditions, including special conditions of sale when using the formal sales method in accordance with FAR and DFARS.
12. Explain the procedures for providing the contractor shipping instructions for transfer or donation in accordance with FAR and DFARS.
13. Identify the items requiring demilitarization, and demilitarization actions that must be performed by the contractor in accordance with DFARS and DoD Manual 4160.21-M-1.
14. Explain DoD policy concerning plaint clearance in accordance with FAR and DFARS.
15. Explain the contents of a plant clearance case file and how to maintain it in accordance with DFARS.
16. Perform inventory screening and determine the most beneficial and cost effective method of property disposition in accordance with FAR and DFARS guidance.

IND 101	Contract Property Administration Fundamentals

Terminal Learning Objectives/Competencies:

1. Plan and perform property control system surveys. Determine when to conduct surveys and the type and objectives of the survey. Identify and brief participants in surveys.
2. Participate in pre- and post-award conferences to manage property under the contract.
3. Investigate and determine appropriate action on property loss, damage or destruction (LDD).
4. Review requirements for Government property.
5. Evaluate and prepare recommendations on requests for Government property (real property, equipment, Special Tooling/Special Tooling Equipment, material and APP).
6. Review property provisions of contracts, make recommendations for revising property control procedures, and establish contract property control records.
7. Review contract modifications and recommend to contractor any necessary revisions to property control procedures.
8. Identify sensitive property by type and initiate action to assure sensitive property is controlled.
9. Initiate request to ACO for funds to test Industrial Plant Equipment for PCBS.
10. Approve or disapprove co-mingling of Government and contractor property.
11. Utilize Government furnished material listings received from Management Control Activities to ensure Government Furnished Material has been received and posted.
12. Requests supporting contract property administration for alternate locations of prime and subcontractor plants.
13. Arrange for storage of Government property. Monitor the actions of the contractor in returning excess property not referred to the Plant Clearance Officer (PLCO). Advise the PLCO as to the existence at a contractor's plant of residual property requiring disposal.
14. Upon termination or completion of a contract, accomplish final review to determine that disposition of all property has been accomplished.
15. Resolve any property administration problems prior to of final contract closeout and plant clearance actions.
16. Notify contractor of property control system deficiencies. Participate in discussion with both contractor and Government to correct system in a reasonable period of time. Assure resolution of deficiencies or recommend to ACO that approval be withdrawn when discrepancies are not resolved.
17. Prepare board of review cases and participate in property board of review meetings.

IND 102	Contract Property Disposition

Terminal Learning Objectives/Competencies, continued:

17. Identify hazardous property and recognize the existence of Federal, State, and local requirements that may impact on its disposal in accordance with NEPA, RCRA, TSCA, FAR, and DFARS.
18. Apply DARIC's program and procedures for reporting and disposing of ADPE in accordance with applicable directives.
19. Discuss current problems and future trends in plant clearance operations in accordance with information provided by the Defense Logistics Agency/Defense Contract Management Command.

IND 103	Contract Property Systems Analysis (Continued)

Terminal Learning Objectives/Competencies:

15. Explain preparation of listings for corrections in the contractor's Property Control System in the following functions:

- Property management controls
- Acquisition of property
- Receiving of property
- Identification of property
- Maintenance of property control records
- Storage of government property
- Movement of government property
- Consumption of property
- Utilization of property
- Maintenance of property
- Physical inventories of Government property
- Preparation of property reports
- Subcontractor's control of property
- Disposition of property
- Close-out of contracts for property

16. Summarize Property Control system deficiencies and prepare notification to the contractor.
17. Describe how to support resolutions of Property Control Systems deficiencies.
18. List the elements of reports prepared and sent to the Administrative Contracting Officer that suggest withdrawing approval when system analysis discrepancies are not resolved.
19. Write a letter of approval designating a Satisfactory Property Control System.
20. Define reports and follow-up procedures for property control system analysis.

IND 201	Intermediate Contract Property Administration

Terminal Learning Objectives/Competencies:

1. Plan property control system surveys. Determine when to conduct surveys and the type and objectives of the survey. Identify and brief participants in surveys.
2. Conduct property control system surveys. Identify deficiencies and recommend corrections in the contractor's process (property management, acquisition, receiving, identification, records, movement, storage, physical inventories, reports, consumption, utilization, maintenance, subcontractor control, disposition, contract property close out).
3. Plan and initiate property management under contracts. Review property provisions of contracts and make recommendations for revising property control procedures. Establish contract property control records and develop property administration plan.
4. Participate in pre- and post-award conferences to manage property under the contract.
5. Investigate and determine appropriate action on property loss, damage or destruction (LDD).
6. Review requirements for Government property and evaluate and prepare recommendations on requests for real property, equipment, Special Tooling/Special Tooling Equipment, material and APP.
7. Review contract modifications and recommend to contractor any necessary revisions to property control procedures.
8. Identify sensitive property by type and initiate action to assure sensitive property is controlled.
9. Initiate request to ACO for funds to test Industrial Plant Equipment for PCBS.
10. Approve or disapprove commingling of Government and contractor property.
11. Utilize Government furnished material listings received from Management Control Activities to ensure Government Furnished Material has been received and posted.
12. Arrange for storage of Government property. Monitor the actions of the contractor in returning excess property not referred to the Plant Clearance Officer (PLCO). Advise the PLCO as to the existence at a contractor's plant of residual property requiring disposal.
13. Upon termination or completion of a contract, accomplish final review to determine that disposition of all property has been accomplished.
14. Resolve any property administration problems prior to of final contract closeout and plant clearance actions. Close out property aspects of contract.
15. Identify roles and responsibilities of other personnel and organizations involved with property management. Identify statutory provisions for property management.

IND 201	Intermediate Contract Property Administration (Continued)
Terminal Learning Objectives/Competencies: 16. Provide contractor with instructions and advise regarding the proper preparation of inventory schedules.	

IND 202	Contract Property Management Seminar

Terminal Learning Objectives/Competencies:

1. Explain the importance of communications and team building in solving problems within the Property Administration Office.
2. Give examples of the importance of property team members as human resources in solving problems.
3. Identify and select the proper population/lot for sampling during a property system analysis.
4. Ability to prepare worksheets for a system analysis using the appropriate criteria for the function or functional segment selected.
5. Discriminate between systemic and non-systemic defects in analyzing sample selected or review.
6. Design a population selection criteria for use by Property Administrators.
7. Discuss new concerns that require resolution by DLA Headquarters.
8. Give examples of the Property Administrator's involvement with the MMAS.
9. Extend the problem areas of property administration to the participating Property Administrator's own environment or work site.
10. Prepare a liability case file for loss, damage or destruction of Government property.
11. Comprehend the Office of the Secretary of Defense's perspective and direction for Government property.
12. Summarizes the changes made to the Special Tooling Clause.
13. Explain the new educational requirements imposed upon the DoD PA.
14. Give examples of the proper disposal methodology for various types of hazardous materials and wastes.
15. Give examples of the proper disposal methodology for various types of hazardous materials and wastes.
16. Generalize about some of the new requirements imposed upon the Property Administrator and brought about by 4161.2-M.
17. Demonstrate the selection of a proper population, sample, and criteria for evaluating a function or functional segment of a contractor's Property Control System.
18. Prepare a liability case file.

IRM 101	Basic Information Systems Acquisition

Terminal Learning Objectives/Competencies:

1. Identify DoD Life Cycle Management regulations, goals, and procedures.
2. Identify information technology Life Cycle Management documentation requirements.
3. Given the DoD Acquisition Deskbook, list the IT LCM documents required for a specified Milestone.
4. Describe the functions of a DoD acquisition strategy and the elements included in an IT acquisition.
5. Identify elements of Program Planning and Budgeting System (PPBS)
6. Describe IT life cycle budget execution goals and objectives.
7. Explain the requirements and factors involved in assessing program costs and returns.
8. Describe the requirements for conducting an economic analysis for an information technology system in the DoD Life Cycle Management process.
9. List and explain the steps of a risk management process for an information technology acquisition.
10. Explain the types and use of measures/metrics in an information technology acquisition.
11. Explain the use of teams in managing information technology acquisition programs and the concepts of team building.
12. Identify higher guidance and IT goals for strategic planning.
13. Describe components of an IT strategic plan.
14. Describe the requirements development process.
15. Explain the purpose for tracing and managing the configuration of requirements.
16. Explain purpose and at least one method for analyzing alternatives.
17. Identify and describe basic principles of technical standards as they relate to system development and interoperability.
18. Describe the integrated architecture framework, the relationships and roles of the DoD operational, systems, and technical architectures, and the impact of these architectures on the IT acquisition process.
19. Identify interoperability terminology, the importance of planning for interoperability in an IT acquisition strategy, and the conceptual components of a IT system architecture and demonstrate the relationship to interoperability.
20. Define key IT systems and software engineering terms, concepts, and methodologies.
21. Explain the purpose for configuration management and at least four configuration management functions.

IRM 101	Basic Information Systems Acquisition

22. Identify requirements, methods, and techniques for quality assurance during the system life cycle.
23. Describe examples of the technical, contractual, and personal issues involved in deploying an IT system.
24. Explain at least two information technologies relative to DoD systems development.
25. Describe information technology systems and methods for facilitating all aspects of program management.
26. Describe data management technologies and methods for DoD IT system acquisition programs.
27. Explain the role, process, and elements of market research in an information technology acquisition.
28. Identify the role and elements of electronic commerce in information technology acquisitions.
29. Identify the contents of an information technology acquisition plan and explain where the information can be obtained.
30. Describe solicitation methods, format, and content and explain the role of the communications-computer acquisition professional in the solicitation process.
31. Identify the contents of a statement of work/SOO and list sources that would help in their development.
32. Explain the role of evaluation criteria in an information technology acquisition.
33. Describe an IT source selection process.
34. Define contract administration and identify the contract administration responsibilities of various government officials and organizations for an IT acquisition.

LOG 201	Intermediate Acquisition Logistics

Terminal Learning Objectives/Competencies:

1. Given access to new DOD policy guidance (DoD 5000.1 & 5000.2-R), summarize emerging concepts and define their impact on acquisition logistics.
2. Apply the principles of Integrated Product and Process Development (IPPD) process via the use of Integrated Product Teams (IPT).
3. Utilize the requirements analysis element of the systems engineering process to establish supportability-related requirements.
4. Given access to a market investigation, analyze technical performance characteristics to determine supportability impacts to a proposed acquisition strategy.
5. Recommend changes necessary to improve supportability test planning.
6. Analyze maintenance planning variables and plan for maintenance of a system.
7. Given access to a system acquisition and a sparing to availability model, develop an optimum maintenance concept that impacts quality of spares and life cycle costs for logistics support.
8. Analyze the manpower and personnel issues that impact Human Systems Integration (HSI), as it relates to the systems engineering process.
9. Analyze how technical publications impact on the supportability of a program and its related costs.
10. Given access to a system acquisition, recommend a training strategy to support this system.
11. Identify the impacts of support equipment planning on supportability.
12. Given access to a system acquisition, analyze and recommend configuration changes that impact on overall supportability.
13. Given access to a system acquisition, assess, analyze, and develop the life cycle cost estimate for the PM's program documentation.
14. Given access to a system acquisition, analyze risk management areas for logistic support and provide recommendations to the PM.
15. Recognize impacts of chosen acquisition strategy (Commercial Item, NDI, Developmental Item and/or combinations) on development of acquisition logistics requirements to include contractual documents and formats.

LOG 203	Reliability and Maintainability

Terminal Learning Objectives/Competencies:

1. Describe what reliability can mean from the perspective of an operator, maintainer, or engineer.
2. Describe the interrelationships of R&M and supportability.
3. Describe how user requirements are translated into qualitative and quantitative R&M parameters.
4. Describe the capabilities and limitations of reliability and maintainability predictions in developing support requirements.

LOG 204	Configuration Management

Terminal Learning Objectives/Competencies:

1. Show the current systems acquisition life cycle phases as well as major activities to be accomplished in each phase. Relate the impact of the on-going acquisition reform initiatives to the current life cycle.
2. Apply the principles of Integrated Product and Process Development (IPPD) via the use of the Systems Engineering Process (SEP) and Integrated Product Teams (IPTs).
3. Classify Systems Engineering and/or Systems Engineering Process in terms of when it is applied, who applies it and the results of each Systems Engineering Process application.
4. Given a scenario and appropriate references, relate the role and interrelationships of the four key elements of Configuration Management (CM) (e.g. Configuration Identification, Control, Status Accounting, and Audits).
5. Differentiate the effects each of the following has on Configuration Management requirements:

- Work Breakdown Structure (WBS)
- Statement of Objective (SOO)/Statement of Work (SOW)
- Systems Engineering Management Plan (SEMP)
- Support

6. Relate the role and interrelationships of Configuration Identification, Interface Management, and Data Management to the Configuration Management process.
7. Given a scenario and appropriate references, develop, evaluate and justify an Engineering Change Proposal (ECP) and perform a mock Configuration Control Board (as outlined in the practical exercise presented). Be prepared to defend your decisions.
8. Relate how the Configuration Status Accounting (CSA) system is used during change implementation.
9. Differentiate between the activities performed during the conduct of the Functional and Physical Configuration Audits (FCA/PCA).
10. Review, critique and revise a draft Configuration Management Plan (CMP) for a developing system.
11. Prepare the documentation (as outlined in the practical exercise presented) assessing the impact of an engineering change when a system is in the production phase of the acquisition life cycle.

LOG 204	Configuration Management (Continued)

Terminal Learning Objectives/Competencies:

12. Prepare the documentation (as outlined in the practical exercise presented) assessing the impact of an engineering change when a system is in the operational support phase of the system acquisition life cycle.
13. Prepare for a software engineering change by developing the correct hardware/software-unique documentation depicting the change and its impacts (as outlined in the practical exercise presented).
14. Given a scenario, correctly apply the configuration management program principles for a developing system.

LOG 205	Provisioning

Terminal Learning Objectives/Competencies:

1. Determine SM&R Codes.
2. Review, Trade-off and approve SM&R Codes
3. Review, Trade-off and approve initial provisioning lists
4. Develop and provide initial provisioning
5. Determine supply support requirements for the system
6. Review, trade-off and approve supply support requirements for the system
7. Know the supply support acquisition process

LOG 304	Executive Acquisition Logistics Management

Terminal Learning Objectives/Competencies:

1. Given appropriate references and a scenario, correctly identify the acquisition system and correctly distinguish the role of the acquisition logistician
   [ELOs36]
2. Given an example, correctly identify Integrated Product and Process Development through IPTs.
   [ELOs37]
3. Correctly identify the role of the Acquisition Logistician in the overall Systems Engineering process.
   [ELOs38]
4. Correctly distinguish reliability, maintainability, and availability measurements and characteristics and relate RM&A in the systems engineering process.
   [ELOs39]
5. Given a solicitation, identify and correctly apply DoD policies to relevant contractual issues.
   [ELOs40]
6. Given a set of choices and the relevant references, identify the implications of eliminating government specifications and standards for private industry and the Department of Defense.
   [ELOs41]
7. Given an ORD, successfully outline and defend the system supportability characteristics for the RFP and the TEMP and the rationale for support related testing.
   [ELOs42]
8. Given a scenario and applicable federal, state, interstate, and local environmental laws and regulations, correctly analyze environmental, safety and health (ESH) impacts on the logistics supportability of a weapon system acquisition program.
   [ELOs43]
9. Given source selection criteria relevant to acquisition logistics issues, determine strategies for final award in accordance with appropriate FAR and DFARS references.
   [ELOs44]
10. Given a sample Operations Requirements Document (ORD), correctly analyze logistics program requirements and thresholds established for each of the HSI domains (manpower, personnel, training, human factors, systems safety, health hazards and survivability).
    [ELOs45]
11. Given examples, apply ethical considerations to various negotiation situations.
    [ELOs46]

LOG 304	Executive Acquisition Logistics Management

Terminal Learning Objectives/Competencies Continued:

12. Given a scenario, analyze and correctly identify the role of the Acquisition Logistician in the overall Systems Engineering process.
    [ELOs47]
13. Given examples, apply methods to incentivize and motivate contractor performance in achieving logistic requirements.
    [ELOs48]
14. Given various examples, analyze the logistics and contracting issues concerning the use of commercial and non-developmental items in weapon system acquisitions.
    [ELOs49]
15. Given a major weapon systems solicitation and contract award document, assess the students knowledge of Lessons 10 through 14.
    [ELOs50]
16. Given a scenario, correctly identify Foreign Military Sales support considerations and Foreign Sourced Material considerations.
    [ELOs51]
17. Given a system and scenario and reference materials, correctly choose possible software tools to enhance support.
    [ELOs52]
18. Given the current preference for re-invention of government, re-engineering logistics functions, and the changing DOD business environment, correctly critique all weapon system sustainment alternatives to include maintenance concepts, course of support, and post-production support.
    [ELOs53]
19. Given a joint program, identify the organizational structure, technical issues and joint requirements as an alternative concept aimed at maximizing jointness and savings.
    [ELOs54]
20. Given a scenario, successfully create and defend an acquisition logistics budget position.
    [ELOs55]
21. Given a scenario calling for a series of major technology insertions (product improvements) into an existing deployed, major system, identify the logistics implications.
    [ELOs56]

PMT 303	Executive Program Manager's Course
Terminal Learning Objectives/Competencies There are no objectives for this course.	

PMT 304	Advanced International Management Workshop

Terminal Learning Objectives/Competencies:

1. To understand key Presidential, Congressional, Department of Defense, Departments of State, Commerce and Treasury, and Service policies on international cooperative defense agreements.
2. To learn to be culturally sensitive.
3. To understand international negotiation and how it differs from domestic negotiation.
4. To learn to negotiate in an international environment.
5. To understand the nature, process and procedures associated with international acquisition agreements.
6. To know the issues most likely to be encountered in negotiation of an international acquisition agreement, and how to negotiate the results according to U.S. policy.

PMT 305	Program Manager's Skills Course (ACAT III Programs)
Terminal Learning Objectives/Competencies There are no objectives for this course.	

PMT 202	Multinational Program Management

Terminal Learning Objectives/Competencies:

1. To understand key national, Department of Defense, and Service policies on international co-development, co-production and cooperative logistics.
2. To understand the various international defense programs related to acquisition (Data Exchanges, Nunn Amendment Programs, Foreign Comparative Testing, Bilateral and Multi-lateral Projects and Programs, and Security Assistance – Foreign Military Sales).
3. To understand the business practices associated with international acquisition programs.
4. To know the organizational structures, practices, and interfaces that are relevant to international acquisition programs.
5. To know the management structures, practices, and interfaces that are relevant to international acquisition programs.
6. To gain awareness of NATO, ANTO nation, and non-NATO designated allied nation acquisition practices and infrastructures, and know how they interact during an international acquisition program with the United States.
7. To understand the security and technology transfer/control issues related to international acquisition programs.

PMT 203	International Security and Technology Transfer/Control

Terminal Learning Objectives/Competencies:

1. To identify, understand and apply the information and technology control requirements of pertinent laws, policy, and regulations related to acquisition and cooperative programs involving foreign governments and their industry.
2. To learn and apply USG/DoD policies and procedures to control and protect classified information and controlled technologies.
3. To know the international security and foreign disclosure implications of a co-production or licensed production program and how to obtain assistance.
4. To understand and apply information security, foreign disclosure, and technology control principles related to cooperative research and development and technical information exchange programs.
5. To know the basic security requirements associated with foreign participation in the acquisition process.
6. To be aware of the effect of Foreign Ownership, Control, or Influence (FOCI) and the role of the Committee on Foreign Investment in the United States (CFIUS) on cooperative acquisition programs.
7. To understand the security and technology transfer/control issues related to international acquisition programs.

PMT 302	Advanced Program Management

Terminal Learning Objectives/Competencies:

1. Given a scenario, summarize the role of the Congress and the Executive Branch in the federal budget process.
2. Given a scenario, identify the process for responding to Congressional inquiries.
3. Given a scenario, show how a program management office operates within the DoD resource allocation process.
4. Given a scenario, assess the implications of the Congressional enactment process on program funding.
5. Given a scenario, assess how Congressional marks impact defense acquisition programs.
6. Given a scenario, assess the impacts of laws affecting the DoD resource allocation process on program budget execution.
7. Given a scenario, propose appropriate program management office actions to address issues caused by the interaction of the requirements generation process, the acquisition management decision process and the Planning, Programming and Budgeting System.
8. Given a scenario, evaluate the impact of advancing information technology on the acquisition, development, and sustainability of information intensive systems.
9. Given a scenario, assess the role of competition, the effects of socio-economic programs, and the methods of contracting for systems acquisition.
10. Given a scenario, compare and contrast the impact of DoD vs. commercial procurement practices and strategies on a program.
11. Given a scenario, compare and contrast commercial and government contractors' financial management practices.
12. Given a scenario, develop a contractor proposal pricing strategy.
13. Given a scenario, describe the impact of government cost principles on defense contractors.
14. Given a scenario, point out how current industrial base laws (e.g., USC 2440), policies, and initiatives affect acquisition program plans.
15. Given a scenario and DoD Handbook 5000.60-H, perform selected portions of an industrial capability assessment.
16. Given a scenario, explain the role of a financial capabilities analysis in: (1) a defense industrial capabilities assessment (DoD Handbook 5000.60-H); (2) a pre-award survey; and (3) during post award contract performance.
17. Given a scenario, assess the impact of a contractor working capital management on a program.

PMT 302	Advanced Program Management

Terminal Learning Objectives/Competencies, continued:

18. Given a scenario, compare and contrast how cost / managerial accounting is used by government and commercial contractors.
19. Given a scenario, identify the risk-return tradeoffs in a contractor's capital asset management decisions.
20. Given a scenario, explain how the contractor's mix of fixed and variable costs impact profitability and risk (cost-volume-profit).
21. Given a scenario, develop a rudimentary contractor cost proposal.
22. Given a scenario, appraise the ability of a program to execute an acquisition strategy based on the budget justification documentation submitted.
23. Given a scenario, demonstrate how the various DoD appropriations support systems acquisition management.
24. Given a scenario, assess the impact of the three phases of the Planning, Programming and Budgeting System on the acquisition process.
25. Given a scenario, assess the implications of the OSD Budget Review process on a program's budget request.
26. Given a scenario, identify the impact of Information Technology and an integrated data environment on program office operations.
27. Given a scenario, analyze the impact of government directed program changes and changes in a contractor's business base on the total cost of an acquisition program.
28. Given a scenario, relate the influences of the macroeconomic environment, national policy, national security and military strategy, and Defense plans and programs to Defense systems acquisition.
29. Given a scenario, assess the impact of applicable federal laws, regulations, and other policies on the defense systems acquisition management process.
30. Given a scenario, analyze the impact of DoD acquisition policies on a program as it progresses through the acquisition life cycle.
31. Given a scenario, identify the impact of the Defense Acquisition Workforce Improvement Act (DAWIA) on program office staffing.
32. Given a scenario, assess the impact of external reviews and audits of an acquisition program.
33. Given a scenario, relate the principles of contract law to procurement planning and the responsibilities of the Program Manager.
34. Given an individual and group exercise, develop a personal, proactive approach to ethical

decision making.

PMT 302	Advanced Program Management

Terminal Learning Objectives/Competencies, continued:

35. Given a scenario, explain the techniques and application of Alternative Dispute Resolution and other dispute avoidance procedures.
36. Given a scenario and information technology capital planning and investment guidance, develop a strategy for managing information technology as an investment.
37. Given a scenario, assess the likelihood of an information system proposal being selected to become a part of an information systems portfolio.
38. Given an information systems economic analysis and extracts from the Director of Program Analysis and Evaluation "DoD Automated Information System Economic Analysis Guide," analyze the system's economic analysis for areas of omissions or weaknesses.
39. Given a scenario, propose a hierarchy of information system / technology performance measures for managing an agency's information technology investment.
40. Given an information systems acquisition scenario, recommend an Investment Baseline / Performance Agreement.
41. Given a scenario, evaluate approaches to resolve an identified information systems acquisition technical or policy issue.
42. Given a scenario, appraise the role of the science and technology process in the systems acquisition process.
43. Given a scenario, identify the impacts of international cooperative programs and foreign military sales on the management of defense programs.
44. Given student presentations, analyze the differences among the Components' acquisition programs, and their impact upon acquisition strategy development and management of a program office.
45. Given a scenario, develop a plan for managing a joint program that integrates the lead and participating components' common and unique requirements.
46. Given a scenario, relate the requirements determination process to the other major decision support systems as defined by DoD 5000.1.
47. Given an Operational Requirements Document and a System Specification, perform a requirements analysis.
48. Given a scenario, propose means of managing critical requirements issues.
49. Given a scenario, analyze how the requirements management process and products for an information intensive system can be improved.
50. Given a scenario, prepare an appropriate acquisition strategy which translates the user's

requirements into a program for systems development considering current legislation, DoD policies, and regulations. M2-990

PMT 302	Advanced Program Management

Terminal Learning Objectives/Competencies, continued:

51. Given a scenario, relate the Defense systems acquisition management decision process as it relates to appropriate acquisition categories and milestones.
52. Given a scenario, summarize the capabilities of the commercial marketplace to satisfy program requirements.
53. Given a scenario, assess the role of cost estimating in supporting the acquisition oversight and review process.
54. Given a scenario, analyze life cycle affordability of an acquisition program.
55. Given a scenario, apply various analysis techniques and the Cost Analysis Strategy Assessment model to make acquisition design and logistics system affordability tradeoffs during the early development of a system.
56. Given a scenario, summarize issues relating to misunderstandings in the use of cost estimating terms.
57. Given a scenario, assess a cost estimate for appropriateness of cost estimating methodology.
58. Given a scenario, assess a cost estimate for completeness and reasonableness.
59. Given a scenario, analyze the impact of contract type on the contractor and the acquisition strategy.
60. Given a scenario, assess the impact of the operations of the Defense Finance and Accounting Service on program operations.
61. Given a scenario, analyze the interaction of contract type and contract payment methodologies on the contractor.
62. Given a scenario, prepare an outline of an acquisition pollution prevention program which complies with DoD environmental security policies.
63. Given a scenario, explain the design impacts of compliance with environmental policies and legislation on the Integrated Product and Process Development.
64. Given a scenario, identify the design issues associated with final system disposition.
65. Given a scenario, recommend disposal of information technology.
66. Given a scenario, choose the appropriate supportability analyses tools and techniques as part of the Integrated Process and Product Development Process.
67. Given a scenario, identify the acquisition logistics objectives and activities that occur in production, fielding/deployment and operational support.
68. Given a group exercise, relate current manufacturing principles affecting cost, schedule and

performance risks.

PMT 302	Advanced Program Management

Terminal Learning Objectives/Competencies, continued:

69. Given an exercise, discuss various sources of manufacturing related problems and risks associated with systems acquisition.
70. Given an exercise, explain how appropriate tools can be used to mitigate a manufacturing problem.
71. Given a scenario, discuss basic sources of manufacturing variation and methods for controlling variability.
72. Given a scenario, discuss the critical elements of a manufacturing strategy.
73. Given an exercise, show how to impact the Producibility of a system during the design phase.
74. Given a group exercise, compare and contrast the elements / benefits of a basic quality system with a system implementing advanced quality practices.
75. Given a scenario, prepare a manufacturing strategy that identifies and addresses manufacturing and quality assurance issues of an acquisition program.
76. Given a scenario, analyze a risk management program.
77. Given a scenario, assess funding risks throughout the program life-cycle.
78. Given a scenario, assess cost risks throughout the program life-cycle.
79. Given scenario, summarize support risks throughout the program life-cycle.
80. Given a scenario, summarize the interrelationships of risks throughout the program life-cycle.
81. Given a scenario, summarize how applicable DoD discretionary and mandatory practices of "Cost As an Independent Variable" could be applied.
82. Given a scenario, develop an acquisition strategy which is in compliance with current mandatory documents and discretionary documents, practices and wisdom.
83. Given a scenario relate the process and procedures for preparing a Request For Proposal that effectively communicates the government's requirements.
84. [Lesson CNX, topic not appropriate for a capstone, will re-evaluate inserting as a functional lesson for APMC 98-1]
85. Given a source selection scenario, analyze the process for conducting source selection, considering procurement integrity rules, in order to ultimately select the "Best Value" contractor.
86. Given a negotiation scenario, analyze the process management issues associated with

proposal evaluation, and the preparation for and conduct of contract negotiation.

87. Given a scenario, analyze the process for conducting a contract negotiation.

PMT 302	**Advanced Program Management**

Terminal Learning Objectives/Competencies, continued:

88. Given a scenario, assess an acquisition program's readiness to progress through the life cycle.
89. Given a scenario, summarize the key activities and information required by policies for the development, production, fielding/deployment, and operational support of a defense system, to include tailoring and planning for decision criteria that apply at each milestone review.
90. Given a scenario, summarize the key activities and information required by policies for initiating development, of a defense system, to include tailoring and planning for decision criteria that apply at the milestone review for program initiation.
91. Given a scenario and sample program reports, assess the requirements, processes and content of external reporting of program status throughout each phase in the system life cycle.
92. Given a scenario, construct a tailored Integrated Product Team to develop an acquisition plan.
93. Given a scenario, apply the activities associated with the post award phase of a contract, including current initiatives.
94. Given a scenario, resolve issues associated with the post award phase of contract administration.
95. Given a scenario, examine the application of an integrated baseline review process and its use as a risk mitigation tool.
96. Given a scenario, choose the appropriate policies governing the application of earned value management for a given acquisition program environment.
97. Given a scenario, assess the appropriateness of earned value management inputs to a Request for Proposal that reflect current policy.
98. Given a scenario, explain the Performance Measurement Baseline development process, content, and its relationship to the achievement of program technical goals and milestones.
99. Given a scenario, appraise the appropriateness, completeness, and consistency of a Performance Measurement Baseline.
100. Given scenario, explain the roles, responsibilities, and benefits of the earned value implementation and surveillance process.
101. Given scenario, analyze contract performance from earned value data.
102. Given a scenario, prepare an integrated program assessment and a corresponding corrective action strategy that considers causes and impacts identified in earned value data.

103. Given a scenario, summarize OSD's use of earned value management and the use of the resulting data to evaluate program status of a major acquisition program.

PMT 302	**Advanced Program Management**

Terminal Learning Objectives/Competencies, continued:

104. Given a scenario, develop an estimate at completion.

105. Given scenario, prepare a design review that provides performance based progress measurement.

106. Given a scenario, identify the Component specific processes that affect the flow of acquisition funds in order to meet design, producibility and stable production / implementation requirements.

107. Given a scenario, show the impact of inflation and the rationale for gaining approval for exceptions to current funding policies.

108. Given a scenario, relate current funding policies in the management of DoD appropriations to the execution of an acquisition strategy.

109. Given a case study, explain the role of the single process initiative methodology for establishing common business and manufacturing processes in a contractor's individual facilities.

110. Given a student exercise, use a work breakdown structure for program planning, organizing and execution.

111. Given a scenario, apply the systems engineering process over the entire systems life cycle.

112. Given a scenario, apply technical risk management throughout the program life-cycle.

113. Given design requirements, a preliminary design and construction materials, conclude that the nature of design is iterative through a process of fabrication, test and evaluation.

114. Given a system design, develop a Preliminary Design Review that will address key design issues.

115. Given a scenario, conclude that the application of the systems engineering process resulted in a valid design solution.

116. Given a scenario, identify methodologies for inserting technology upgrades and maintaining technical currency.

117. Given a student exercise, apply DoD policies concerning commercial standards and performance specifications in writing an item performance specification.

118. Given a scenario, choose the appropriate configuration management strategy for the situation encountered.

119. Given a scenario, analyze the impacts of common information system configuration and

interface management problems on information systems program management.

120. Given a scenario, select an appropriate data management strategy for an information intensive program.

PMT 302	**Advanced Program Management**

Terminal Learning Objectives/Competencies, continued:

121. Given a scenario, summarize how current DoD technical policies and architecture requirements impact the acquisition, development, modification, upgrade and support of software-intensive systems.

122. Given an information system description, determine the impact of complying with DoD interoperability and open system standards goals on cost, schedule, and performance.

123. Given a scenario, summarize appropriate program protection methods for systems acquisition.

124. Given a scenario, assess the impact of information warfare on information systems' architectures and strategies.

125. Given a scenario, choose appropriate information systems security requirements.

126. Given a scenario, select information system security protection methods.

127. Given a scenario, examine the role and responsibilities of the information system program manager in obtaining security accreditation.

128. Given an in class simulated scenario, relate the software development process and the software technical life cycle to the overall system acquisition process.

129. Given program summary documentation for a software-intensive system, assess the system for adequacy of resource planning and support.

130. Given programmatic documentation for a system, select software development paradigms and program management strategies appropriate for development of software-intensive systems.

131. Given a scenario, relate software quality and testing and evaluation "Best Practices" to system development and system level testing processes.

132. Given programmatic documentation for a software-intensive system, assess the use of appropriate software acquisition risk mitigation strategies based on accepted Best Practices.

133. Given program audits and lessons learned reports of software intensive systems, assess key management issues, laws and regulations that characterize the current DoD Software Acquisition Management Environment.

134. Given a scenario, assess the methods and procedures for an information intensive system's quality management program.

135. Given a scenario, choose testing methodologies appropriate for an information intensive system development or acquisition.

136. Given programmatic documentation for a software-intensive system, appraise tools and techniques available to the program office for planning, measuring and predicting software development and support.

PMT 302	**Advanced Program Management**

Terminal Learning Objectives/Competencies, continued:

137. Given a software intensive system scenario, justify a selected software development process and acquisition strategy.

138. Given a scenario, recommend actions to implement a software process improvement program.

139. Given a scenario, relate the acquisition logistics process, acquisition logistics functions and documentation needs to the system life cycle.

140. Given a scenario, examine the process and impacts of Reliability, Availability, and Maintainability policies and program objectives on systems design and performance for both hardware and software.

141. Given a scenario, apply warranty and performance guarantee techniques, tools and tradeoffs available to the program manager to enhance system affordability and reduce life cycle cost where appropriate.

142. Given a scenario, assess the impact of acquisition logistics functions and documentation on programs using commercial & non-developmental items.

143. Given a scenario, assess the ability of commercial & non-developmental items to meet unique military requirements.

144. Given a scenario, assess the ability of commercial & non-developmental support to meet DoD operations and support requirements.

145. Given a scenario, propose appropriate sustainment and technology refreshment strategies.

146. Given appropriate source documents (e.g., Mission Needs Statement, Operational Requirements Document, Analysis of Alternatives, System Threat Assessment, Test and Evaluation Master Plan), appraise the managerial effectiveness of the test and evaluation program.

147. Given a scenario, analyze elements of an integrated acquisition test and evaluation program.

148. Given a scenario, relate the Test and Evaluation process to the roles and responsibilities of the key Test and Evaluation positions, organizations and statutes.

149. Given a scenario, point out the role of test and evaluation participants in the application of Developmental Test and Evaluation policies and processes.

150. Given a scenario, point out the role of test and evaluation in the application of

Operational Test and Evaluation policies and processes.

151. Given a scenario, identify the requirements for Live Fire Test & Evaluation.

152. Given a scenario, summarize the purpose of Developmental Test and Evaluation.

153. Given a scenario, summarize the purpose of Operational Test and Evaluation.

PMT 302	**Advanced Program Management**

Terminal Learning Objectives/Competencies, continued:

154. Given a scenario, apply "Best Supportability Practices" to optimize sustainability for defense systems.

155. Given a scenario, explain the benefits and tradeoffs of modeling and simulation and prototyping as tools supporting the system life cycle.

156. Given a scenario, evaluate the planning, risks, and application of modeling and simulation in the system acquisition process.

157. Given a scenario, synthesize how modeling, simulation and prototyping tools can assist in technology insertion, modifications, product improvements, preplanned product improvements, post production support, service life extensions, life cycle cost, and disposal / demilitarization / recycling.

Given a demonstration, evaluate the planning, and risks associated with an actual weapon system simulation using Advanced Distributed Simulation (ADS).159. Given a scenario, evaluate the planning, risks, and application of modeling and simulation in test and evaluation.

160. Given an scenario, evaluate the interrelationships of the inputs and outputs of factory simulation models to optimize factory capacity and flow.

161. Given a scenario, appraise a management plan for the post-production phase of the system life cycle, including the potential for out-of-production parts and diminishing manufacturing sources.

162. Given a scenario, propose solutions to typical issues associated with planning for the deployment / fielding of a system.

163. Given a scenario, recommend program responses to issues which are likely to arise during information systems deployment.

164. Given a scenario, assess an implementation plan for follow-on logistics support and maintenance of a major system upgrade.

165. Given an exercise, prepare a vision and mission statement that communicates the program's purpose.

166. Given individual MBTI™ preference results and exercises, assess an effective program management team using interpersonal, managerial, and organizational skills.

167. Given an exercise, demonstrate effective leadership behaviors in a program

management situation.

168. Given a scenario, develop a transformation strategy and techniques for communicating change and leadership requirements for introducing or modifying a major system.

169. Given a scenario, resolve interpersonal issues in the development of an effective team for a program management situation.

PMT 302	**Advanced Program Management**

Terminal Learning Objectives/Competencies, continued:

170. Given the PROFILOR report results, discover areas of strengths and self improvement in an acquisition management environment.

171. Given information from the previous class on the PROFILOR report, prepare a plan for self improvement.

172. Given a team exercise, assess the role of empowerment and coaching in the current acquisition environment.

173. Given an exercise, apply techniques to build team consensus during problem solving and decision making.

174. Given a team exercise, demonstrate the skills of an effective team member and team leader.

175. Given a series of team challenges (problem solving exercises), combine team building principles and decision making methods to successfully implement team decisions.

176. Given a scenario, illustrate how business process re-engineering techniques can improve functional processes.

177. Given a scenario, demonstrate person-to-person and team-to-team level interpersonal negotiation skills dealing with conflict in the program management environment.

178. Given a scenario, conclude a negotiation in a team environment.

PQM 101	Production and Quality Management Fundamentals

Terminal Learning Objectives/Competencies:

1. Chart the current systems acquisition life cycle phases as well as major activities to be accomplished in each phase. Relate the impact of the on-going acquisition reform initiatives to the current life cycle.
2. Apply the principles of Integrated Product and Process Development (IPPD) process via the use of Integrated Product Teams (IPTs).
3. Classify Systems Engineering and/or Systems Engineering Process in terms of when it is applied, who applies it and the results of each Systems Engineering Process application.
4. Given a noncomplex requirement, write a performance specification IAW SD-15.
5. Given access to a system acquisition, distinguish the role of manufacturing and quality in the Source Selection Process in an IPT environment.
6. Given access to a system acquisition, distinguish the basic elements of the contract administration service delegation process.
7. Given access to a system acquisition, recognize the output of various electronic tools within the design and manufacturing process.
8. Identify and distinguish IPT/IPPD functions and the input of manufacturing and quality required to meet the user's needs through integrated management planning.
9. Identify the basic types of warranties, incentive fees and performance incentives.
10. Given access to a system acquisition, distinguish quality assurance and production FAR/DFAR requirements and select applicable clauses.
11. Given access to a system acquisition, conduct analysis in support of the Contracting Officer by calculating a progress payment and a physical progress review completion percentage.
12. Identify the basic criteria and elements of manufacturing and quality assurance systems based on ANSI/ASQC Q9000.
13. Given portions of a control chart to complete, apply mechanics of problem-solving tools and perform required calculations.
14. Recognize the impact of current DoD policies as they relate to Industrial Capabilities IAW the Defense Industrial Capabilities Handbook.
15. Recognize the policies and procedures for avoiding improper business practices and conflicts of interest.

PQM 103	Defense Specification Management Course

Terminal Learning Objectives/Competencies:

1. Convert operational needs into requirements in predominately performance terms.

2. Conduct market research.

3. Determine applicable types of acquisition requirement documentation (including the solicitation and contract).

4. Prepare and maintain clear, current documentation of requirements.

5. Use of specifications, standards and related documents properly in acquisitions.

6. Implement current policy initiatives that relate to specifications and standards and acquisition reform.

PQM 104	Specifications Selection and Application Course

Terminal Learning Objectives/Competencies:

1. Convert operational needs into requirements in predominately performance terms.

2. Determine applicable types of acquisition requirement documentation (including the solicitation and contract).

3. Prepare and maintain clear, current documentation of requirements.

4. Use of specifications, standards and related documents properly in acquisitions.

5. Implement current policy initiatives that relate to specifications and standards and acquisition reform.

PQM 201	Intermediate Production and Quality Management

Terminal Learning Objectives/Competencies:

1. Chart the current systems acquisition life cycle phases as well as major activities to be accomplished in each phase in accordance with (IAW) DoD 5000 series documents
2. Apply the principles of Integrated Product and Process Development (IPPD) process via the use of Integrated Product Teams (IPTs) IAW current DoDD 5000.1, DoD 5000.2-Regulation, Rules of the Road, and the Guide to implementation and management of IPPD in DoD Acquisition
3. Chart the Systems Engineering Process in terms of when it is applied, who applies it and the results of each Systems Engineering Process application
4. Given a SD-15 and a complex system requirement, analyze the requirement and write performance specifications IAW SD-15
5. Apply FAR/DFARS policies governing warranties and incentives IAW DoD 5000 series documents.
6. Given a sample contract and/or RFP apply the requirements within the limits of the authority provided by the Federal Acquisition Regulation (FAR) and Defense Federal Acquisition Regulation Supplement (DFARS), and be able to defend the need for the requirements.
7. Apply the source selection process including the RFP, Statement of Objectives/Statement of Work (SOO/SOW), Selection Criteria, and Instruction to Offerors IAW DoD 5000 series and the FAR/DFARS.
8. Given a sample integrated management plan analyze the adequacy to the details in the manufacturing and quality aspects IAW DoD 5000 series, FAR/DFARS, and commercial quality and production planning models.
9. Apply the Pre-Award Survey, Technical Support to Negotiations, and Progress Payments processes IAW DoD 5000 series and FAR/DFARS.
10. Apply the delegation process IAW DoD 5000 series and FAR/DFARS.
11. Determine the impacts of key environmental laws on production and quality management.
12. Distinguish the impact of current DoD policies as they relate to Industrial Capabilities IAW the Defense Industrial Capabilities Handbook.
13. Given access to a system acquisition, identify the outputs of electronic tools and analyze whether the technologies and their products have been used properly within the design and manufacturing process.

PQM 203	Commercial Item

Terminal Learning Objectives/Competencies:

1. Apply commercial and nondevelopmental item (NDI) policy and regulations to acquisition decisions
2. Perform market surveillance to identify commercial products, processes, and technologies and other nondevelopmental products potentially capable of meeting DoD needs
3. Use market data In developing requirements to satisfy material deficiencies
4. Conduct a comprehensive market investigation relative to a specific requirement (such as documented in an operational requirement document).
5. Analyze market data to identify specific commercial opportunities, including potential requirement characteristic trade-offs and alternative technologies
6. Integrate a variety of functional and operational requirements into commercial item description
7. Process standard (nongovernment standard, Defense standard) which allows commercial solutions
8. Evaluate commercial alternatives at each level of material requirements (system, subsystem, component)
9. Modify or tailor the test and evaluation plan for specific commercial or NDI acquisition
10. Determine market acceptance based on preestablished criteria
11. Understand implications on warranties and technical data rights of commercial acquisitions
12. Research commercial market to identify potential, nontraditional sources of supply

PQM 201	Intermediate Production and Quality Management (Continued)

Terminal Learning Objectives/Competencies:

14. Given access to a system acquisition, assess the effectiveness of Quality Assurance and Manufacturing systems and processes IAW DoDD 5000.1, DoD 5000.2-R, DFARS MMAS and non-government quality standards.
15. Given access to a system acquisition, recognize the various problem solving tools and processes and determine whether these products have been used properly.
16. Recognize the policies and procedures for avoiding improper business practices and conflicts of interest IAW government standards of conducts.

PQM 202	Commercial and Nondevelopmental Item Acquisition Course

Terminal Learning Objectives/Competencies:

1. Apply commercial and nondevelopmental item (NDI) policy and regulations to acquisition decisions
2. Perform market surveillance to identify commercial products, processes, and technologies and other nondevelopmental products potentially capable of meeting DoD needs
3. Develop system hierarchies using architectures and system designs that facilitate commercial and NDI use
4. Use market data in developing requirements to satisfy material deficiencies

Conduct a comprehensive market investigation relative to a specific requirement (such as documented in an operational requirement document)

6. Analyze market data to identify specific commercial and NDI opportunities, including potential requirement characteristic trade-offs and alternative technologies
7. Integrate a variety of functional and operational requirements into a purchase description (system specification, commercial item description, Defense specifications, statement of work)
8. Structure acquisition strategies that allow efficient use of commercial and NDI
9. Evaluate NDI alternatives at each level of material requirements (system, subsystem, component)
10. Modify or tailor the test and evaluation plan for specific commercial or NDI acquisition
11. Determine contract type(s) appropriate for specific commercial and NDI acquisitions
12. Identify incentives which maximize NDI use at all levels of equipment (system, subsystem, and component), such as design to cost analysis, alternative proposals, acquisition streamlining, etc.
13. Determine market acceptance based on preestablished criteria
14. Understand implications on warranties and technical data rights of commercial and NDI acquisitions
15. Research commercial market to identify potential, nontraditional sources of supply
16. Structure Section L of solicitation (certifications and representations) for commercial and NDI acquisitions

PQM 202	Commercial and Nondevelopmental Item Acquisition Course

Terminal Learning Objectives/Competencies, continued:

17. Structure evaluation factors to maximize use of commercial and NDI; include considerations unique to NDI when appropriate
18. Compare solicitation and operational requirements document to identify necessary changes to assure the success of commercial and NDI acquisitions
19. Evaluate contractor or other military service logistics support versus organic support
20. Identify logistics issues to be addressed to support a specific commercial or NDI and structure an appropriate support strategy
21. Map strategies for potential model and mark changes resulting from product upgrades or model changes
22. Evaluate NDI alternatives at each level of material requirements (system, subsystem, component)

PQM 212	Market Research Course

Terminal Learning Objectives/Competencies:

1. Apply commercial and nondevelopmental item (NDI) policy and regulations to acquisition decisions
2. Perform market surveillance to identify commercial products, processes, and technologies and other nondevelopmental products potentially capable of meeting DoD needs
3. Develop system hierarchies using architectures and system designs that facilitate commercial and NDI use
4. Use market surveillance data in developing requirements to satisfy material deficiencies
5. Conduct comprehensive investigation relative to a specific requirement (such as documented in an operational requirement document).
6. Analyze market data to identify specific commercial and NDI opportunities, including potential requirement characteristic trade-offs and alternative technologies
7. Integrate a variety of functional and operational requirements into a purchase description (system specification, commercial item description, Defense specifications, statement of work)
8. Evaluate NDI alternatives at each level of material requirements (system, subsystem, component)
9. Determine market acceptance based on preestablished criteria
10. Understand implications on warranties and technical data rights of commercial and NDI acquisitions
11. Research commercial market to identify potential, nontraditional sources of supply
12. Compare solicitation and operational requirements document to identify necessary changes to assure the success of commercial and NDI acquisitions
13. Evaluate contractor or other military service logistics support versus organic support
14. Identify logistics issues to be addressed to support a specific commercial or NDI and structure an appropriate support strategy.

15. Map strategies for potential model and mark changes resulting from product upgrades or model changes
16. Evaluate NDI alternatives at each level of material requirements (system, subsystem, component)

PQM 301	Advanced Production and Quality Management Course

Terminal Learning Objectives/Competencies:

1. Given the lecture, discussions, and exercise the student will be able to define the impact of a changing acquisition reform, quality, and systems engineering paradigms on the DoD acquisition community.
2. Show the current systems acquisition life cycle phases as well as major activities to be accomplished within the acquisition management system framework.
3. Given an illustrated acquisition program case, evaluate the effectiveness of a risk management process in an Integrated Product and Process Development (IPPD) / Integrated Product Team (IPT) environment.
4. Classify Systems Engineering and/or Systems Engineering Process in terms of when it is applied, who applies it and the results of each Systems Engineering Process application.
5. Apply the principles of Integrated Product and Process Development (IPPD) via the use of the Systems Engineering Process (SEP) and Integrated Product Teams (IPTs).
6. Given the discussions and exercise a student should be able to analyze the maturity of a manufacturing and/or quality assurance organization's involvement in an IPT.
7. Given the discussions and exercise a student will demonstrate an understanding of the basic principles associated with manufacturing and quality assurance.
8. Given the lecture discussions and exercise a student should be able to use an ethical decision-making model (GKC) to establish the major elements and relationships for deploying new quality and IPPD paradigms within an organization.
9. Given the lecture/discussions a student will demonstrate an understanding of several functional tools associated with manufacturing and quality assurance.
10. Given the lecture and exercise a student should be able to derive customer requirements using an analytical tool (QFD).
11. Given the lecture and exercise a student should be able to derive key factors for process control using an analytical tool (DOE) in an IPT environment.
12. Given the exercise and case study a student should be able to select the appropriate analytical tool to resolve production and quality assurance problems and analyze the interrelationships of these tools.
13. Given a piece of hardware a student should be able to derive a design-build package through the integration of various technical disciplines within an IPPD Team environment.
14. Given the lecture and discussion a student should be able to assess the effectiveness of manufacturing and quality assurance systems and processes.
15. Given the lecture and discussion a student should be able to summarize the differences

between craft, mass, and lean design and production principles and practices and derive a synthesized approach to government oversight.

PQM 301	Advanced Production and Quality Management Course

Terminal Learning Objectives/Competencies, continued:

16. Given an exercise and discussions a student should be able to evaluate the interrelationships of the inputs and outputs of factory simulation models to optimize factory capacity and flow.
17. Given student readings, lecture, classroom discussions and exercises a student should be able to integrate current industrial base laws, policies, initiatives and issues into acquisition program plans, and explain the DoD process to be used when a critical Defense unique industrial capability is needed and appears to be endangered.
18. Given lecture and class discussions, a student should be able to summarize the key aspects of topical initiatives, and assess their impacts on both the contractor and the government.
19. Given student lecture and classroom discussions a student should be able to explain the impact of environmental, safety and health (ESH) related laws, Executive Orders, policies, and regulations on the way DoD acquisition managers control the design, manufacture, and Life Cycle Cost of DoD weapon systems.
20. Given lecture and discussions a student should be able to explain the implications of new policies and issues in establishing a new acquisition environment.
21. Given lecture and discussions a student should be able to identify the implications of contractor proposed manufacturing and QA systems and processes in the new acquisition environment.
22. Given exercise and discussions a student should be able to demonstrate an ability to use electronic tools to capture manufacturing and quality assurance information and explain the inputs and outputs of electronic tools.
23. Given the lecture and discussion a student should be able to describe contractor cost accounting systems and how these systems are used by government personnel to evaluate TSNs (Technical Support of Negotiations).
24. Explain how to use the RFP, source selection, and contracting process and documentation to support the translation of technical (production/QA) goals and initiatives to the contractor.
25. Given lecture and discussions a student should be able to assess the degree of effectiveness of warranty programs.
26. Explain when to apply Value Engineering principles within the systems acquisition lifecycle.
27. Given discussions and an exercise a student will be able to develop and evaluate manufacturing and quality assurance contract requirements (SOW/SOO/RFP/Source

Selection).

PUR 101	Simplified Acquisition Fundamentals

Terminal Learning Objectives/Competencies:

1. Correctly demonstrate the ability to choose applicable regulatory guidance.
2. Identify the authority and responsibility of the contracting officer and/or buyer and the environment in which they operate.
3. Identify and correctly restate the policies for standards of conduct and/or fraud.
4. Determine if a simplified acquisition package is accurate and complete.
5. Correctly choose the required source for an acquisition.
6. Correctly distinguish the requirements for establishing, maintaining, and retaining a contract file.
7. Identify sources of supply and determine small business and competition requirements.
8. Identify the different simplified acquisition procedures and contract types for a requirement within the simplified acquisition threshold.
9. Identify presolicitation considerations, determine method of publication and price related factors for a requirement.
10. Prepare a solicitation for a simplified acquisition requirement.
11. Explain the procedures for handling quotes, amending or canceling solicitations, and responding to inquiries concerning solicitations.
12. Correctly research and document a determination of responsibility/nonresponsibility.
13. Apply the correct evaluation criteria and select a contractor for award.
14. Summarize the methods of award and prepare calls against BPAs.
15. Distinguish between personal and nonpersonal services, identify whether the Service Contract Act applies, and recognize when to incorporate wage determinations in the solicitation.
16. Correctly identify unique A&E or construction acquisition policies and procedures.
17. Recognize the proper policies and procedures for acquiring information technology resources. **NOTE: THIS COMPETENCY MAY CHANGE OR BE DELETED DEPENDING ON FINAL IT REGULATIONS.**
18. Identify the appropriate administrative action and response to changing contract post-award circumstances.
19. Apply appropriate action in response to quality assurance functions.
20. Correctly choose an acceptable contractual remedy.
21. Correctly identify the necessary actions for contract close-out.

PUR 201	Intermediate Simplified Acquisition Procedures

1. Terminal Learning Objectives/Competencies:
2. Identify the procedures for processing unsolicited proposals.
3. Prepare an informal workload plan.
4. Identify and establish sources of supplies or services, conduct market research and determine competition requirements for simplified acquisitions.
5. Determine which solicitation considerations apply.
6. Prepare a soliciatation.
7. Analyze the responses in sufficient detail to prepare a price reasonableness determination or recommend further action by the buyer.
8. Demonstrate the ability to prepare for an complete the negotiation action; identify and resolve mistakes and formulate the final price in an economic price adjustment situations.
9. Demonstrate the correct procedure for handling post-award mistakes and conducting debriefings and/or post-award orientations.
10. Perform contract administration functions to resolve post award problems.
11. Distinguish when contract modifications are necessary.
12. Identify the procedures for pursuing government remedies.
13. Show the correct procedures for handling pre and post award protests and review the process of analyzing claims and recommending settlement positions.
14. List the procedures necessary to collect contract debts and to pay the contractor.

SAM 201/ISAM	Intermediate Software Acquisition Management

Terminal Learning Objectives/Competencies:

1. Given the ISAM lesson materials (course books) and the overall schedule for the current ISAM offering, the student will correctly identify the lessons and find appropriate lesson materials.
2. Given the introductory material on the rationale for the Software Acquisition Management competency and course development processes, students will relate the requirement for software acquisition management training to their current position within the acquisition workforce and their current assignment.
3. At the end of this lesson, students will be able to describe the assessment process used in ISAM. Students will evaluate their strengths and weaknesses against the standards used to develop the course and, within an assigned work group, derive a list of software acquisition management issues and concerns for use in later lessons.
4. Given a Mission Need Statement and an Operational Requirements Document for a naval multi-warfare warfighting system, the student will describe the role of the SKYFIRE Launching System in the naval warfighting system and the potential impact of computer resources on SKYFIRE life-cycle management.
5. Given acquisition strategies used for software and software-intensive systems, the associated strategy tailoring techniques, risks associated with the application of those strategies to various system domains, and material describing a specific system, a student should be able to tailor an acquisition strategy to meet the characteristics of the assigned system and describe the corresponding risks associated with their strategy tailoring efforts.
6. Given a system requirement, materials describing the major elements of a system architecture, and domain specific knowledge, the student will select potential products that may be incorporated into an architecture that supports the principles of open systems, reuse, use of non-developmental items, and interoperability.
7. Given an explanation of software life cycle paradigms and support planning considerations related to software intensive systems students will relate post deployment support planning for software to the overall system development process and distinguish activities that apply to software development and lifecycle support in the various application domains. Given a situation in one of those domains students will identify roles played by various functional and technical organizations in computer life cycle support planning.
8. Given a summary of technical information available during Concept Exploration & Definition the student will evaluate this information and identify management implications of proposed alternatives for the weapon system design and architecture of a software-intensive weapon system. Issues related to the stability of requirements, the accuracy of cost estimates and the feasibility of proposed schedules will be used to develop preliminary acquisition strategies.

SAM 201/ISAM	Intermediate Software Acquisition Management

Terminal Learning Objectives/Competencies, continued

1. Given system requirements, architectural constraints, and other domain-related information, the student will develop a plan for acquiring computer resources supporting a system through its lifecycle. Plan will include consideration of issues related to open systems, reuse, commercial items, and interoperability.
2. Given an acquisition strategy, software development paradigm, and an application domain, students will explain the system development process for a software intensive system, the relationship(s) between the systems and software requirements management processes, methodologies and techniques available for software requirements management and risk mitigation, and the major roles and responsibilities of the software acquisition manager in requirements management and risk mitigation.
3. Given a system in the early stages of development, user documentation of system level requirements and plans for the development and support of that system; the student will identify the software acquisition activities required during the system life-cycle; relate these activities and the phasing of software-based capabilities to the development of the operational requirements, and identify management issues associated with implementing particular approaches to development and support.
4. Given the requirement to test a software intensive system, students will develop and/or modify plans to ensure effective software and system test programs are in place for software intensive systems. Plans will include developmental, operational and certification requirements for systems in various application domains.
5. Given a scenario of a software intensive system nearing scheduled completion and results of testing, students will develop recommendations to modify plans to ensure an effective software and system test program is incorporated into program replanning efforts. Plans will include developmental, operational and certification requirements for this system and organizational issues associated with implementing these plans.
6. Given prior instruction on computer resources lifecycle management and an overview of economic analysis processes and Cost as an Independent Variable (CAIV), students will identify costs associated with the various application domains and identify tradeoffs that may be made between cost, schedule and performance in a CAIV environment.
7. Given a model of software development and today's streamlined acquisition environment using an IPT approach to management oversight, the student will develop a generic milestone review schedule for a software intensive system and relate the given software development models to required management and oversight activities in the lifecycle of a software intensive system.

SAM 201/ISAM	Intermediate Software Acquisition Management

Terminal Learning Objectives/Competencies, continued

1. Given MIL-STD-498 and other reference material used to apply this standard to a software intensive system development, the student will describe the framework provided by MIL-STD-498 for development of systems and software; relate alternative development models and best practices to the standard; and identify portions of the standard used to guide the implementation of development processes.
2. Given information on the state of the practice in modeling, simulation, and prototyping; students will relate the use of models, simulations, and prototyping to the planning for activities, tools, and facilities in the various phases of development of software intensive systems in a variety of application domains.
3. Given a proposed program summary of a system beginning development and prior instruction on computer resources planning, acquisition streamlining, and development paradigms, the student groups will develop a milestone review plan, recommend organizations for inclusion on oversight IPTs and describe the applicable activities that will support the development of this software intensive system.
4. Given material on acquisition strategy, known risks of a given program and application area, and the guidelines provided by MIL-STD-498, the student groups will develop a build plan and recommend tailoring of the MIL-STD-498 to mitigate known risks and meet the goals of the program for development and life cycle support.
5. Given the requirement to produce a quality product, students will evaluate contractor plans for software development, focusing on the integration of Software Quality Assurance (SQA) into the lifecycle management of the product under development.
6. Given the government program office needs for software test program planning, students will evaluate the use of human based testing and formal inspections for visibility into project progress, quality of products, management control, and evaluation of testing sufficiency.
7. Given a software development plan from a developer students will analyze this plan summarizing issues related to program baselines, interfaces, integration, change control, quality and process improvement during development and propose improvements to this plan.
8. Given an introduction to cost estimating and the process used for estimation of software development costs the students will explain the software estimating process, techniques used in preparing cost estimates for software acquisition, and the benefits and limitations of cost models.
9. Given a commercial cost estimation tool and an engineering summary of information related to development SIs, the students will complete a “should cost” estimate which may be used to support evaluation of developer’s cost proposals during source selection.

SAM 201/ISAM	Intermediate Software Acquisition Management

Terminal Learning Objectives/Competencies, continued

1. Using a modern cost estimation tool and given estimates of the software development cost by two offerors, students will evaluate the estimates, determine reasons for the differences in the estimates, and derive questions related to the developers process and maturity from the estimate.
2. Given a software intensive system, an overall development strategy, and the need to use contracted resources to acquire the desired software capabilities, the student will compare alternatives, select a strategy, and prepare relevant portions of the RFP for acquiring software consistent with the overall program life cycle management plan.
3. Given a software intensive system acquisition the student will identify key activities and tasks essential for the evaluation of proposals and the selection of contractors and relate key software requirements, developer maturity and past performance to the criteria used for contract award in a software-intensive systems competition.
4. Given material on the Capability Maturity Model and other models that may be used for the assessment and evaluation of developer capability and/or maturity, the students will differentiate between software developers at various levels of maturity and describe characteristics of organizations at various maturity levels.
5. Given Key Process areas described in the SW-CMM and an overview of the Software Capability Evaluation process the students will prepare for a site visit as part of a Software Capability Evaluation.
6. Given Key Process Areas outlined in the SW-CMM and guidance on the conduct of a Software Capability Evaluation during source selection, students will conduct a simulated on site visit and gather information for inclusion in the SCE portion of the source selection.
7. Based on the requirement to manage project risk, students determine project management metrics and measurements to estimate and track product development, quality and schedule, based on identified risk areas.
8. Given the requirement to measure both the progress of the development and the maturity of the software product, students will assess measurements and actions required to enable the acquirer to manage risks associated with the software product quality and maturity and progress toward the completion of the project using selected maturity metrics and earned value based progress measurement.
9. Given a scenario involving a developer and certain risk factors the students will develop an outline of a metrics and measurement plan that will allow for visibility of product maturity and project progress and allow the developer and the acquirer to assess the maturity of the software products and progress toward completion while monitoring potential risk areas.
10. Given a scenario of a system nearing completion and a requirement to deploy this system to

an operational site, students will develop a plan for deploying the system and transitioning the maintenance of the system from the developer to the maintainer.

SAM 201/ISAM	Intermediate Software Acquisition Management

Terminal Learning Objectives/Competencies, continued

1. Students will relate Post Deployment Software Support to the overall life cycle, including the major activities that take place during this phase and the changing role of the users and program manager during this phase, and the distinction between reengineering and "maintenance" during the support phase.
2. Students will apply "software development best practices" using available sources of support and information relative to emerging methodologies, standards, practices, and critical success factors.
3. Students will demonstrate a knowledge for concepts and tools demonstrated throughout the course by applying what they have learned to a modification scenario. Students will complete the planning actions required to meet the goals of changing a system and integrate the changed system into an existing deployment plan.
4. Students will present the results of the final assessment exercise that began in ISAM 284, including a summary of their cost estimate, a plan for integrating the modification into the existing fielding plan, and a plan for meeting requirements for operational testing.
5. This lesson provides the opportunity to distribute final student assessments and suggested continuing education plans, along with obtaining from each student written evaluative comments on ISAM course structure and content.
6. This module provides the administrative opportunity to check in issued equipment, be officially "checked out" of the course, and be issued a diploma in a formal graduation ceremony.

SAM 301	Software Acquisition Management

Terminal Learning Objectives/Competencies:

1. Summarize the course goals and curriculum content
2. Summarize their education experience in the Sam 301 Course.
3. Assess their SAM 301 education experience.
4. Evaluate the nature of the software crisis and current strategies for addressing the crises.
5. Evaluate the impact of acquisition reform and streramlining on acquisition management for software intensive systems.
6. Assess the revised business orientation reflected in the new DoD acquisition policy.
7. Formulate a strategy for acquiring software intensive systems.
8. Evaluate the impact of selected technologies on the acquisition and development of software intensive systems.
9. Evaluate the success factors for creating and sustaining cohesive teams within a software organization.
10. Select and justify a software acquisition methodology that supports their acquisition strategy.
11. Evaluate methodologies for determining, refining, implementing, and testing software intensive system requirements.
12. Select an appropriate reengineering strategy to implement a software intensive system.
13. Determine the efforts required to initiate and to manage change in the requirements management phase of the acquisition of software intensive systems.

14. Evaluate the impact of security, safety and privacy requirements on the development of an acquisition strategy for software intensive systems.

15. Determine the interoperability issues and impacts on software acquisition.

16. Summarize the strengths and weaknesses of incorporating software product reuse and CaNDI products into the acquisition strategy of an information intensive system.

17. Assess the benefits and limitations that implementing a standards based architecture brings to the acquisition strategy for an information intensive system.

18. Apply risk management principles to a software acquisition to identify, analyze, and control risks of program failure.

19. Evaluate strengths and weaknesses of software cost estimation methods and models.

20. Validate the maturity of a developer's software processes.

21. Select methodology for applying the best practices to a software intensive system acquisition strategy.

22. Determine the operational requirements, risks and implementation costs of a software quality management program

23. Evaluate and use metrics as a component of quality assurance in the acquisition of a software intensive system.

24. Evaluate whether a software-testing programs adequately supports the acquisition life cycle of an information intensive program.

25. Choose appropriate quality management methodologies based on cost, schedule, and risk management considerations.

SYS 201	Intermediate Systems Planning, Research, Development and Engineering

Terminal Learning Objectives/Competencies:

1. Show the current systems acquisition life cycle phases as well as major activities to be accomplished in each phase. Relate the impact of the on-going acquisition reform initiatives to the current life cycle.
2. Apply the principles of Integrated Product and Process Development (IPPD) via the use of the Systems Engineering Process (SEP) and Integrated Product Teams (IPTs).
3. Classify Systems Engineering and/or Systems Engineering Process in terms of when it is applied, who applies it and the results of each Systems Engineering Process application.
4. Apply the regulatory ethical behaviors that government employees are legally responsible to follow.
5. Identify sources and methodologies involved in the insertion of technology.
6. Relate the role of planning in the systems engineering effort and its relationship to overall program planning.
7. Apply the Requirements Analysis steps within the Systems Engineering Process.
8. Apply the Functional Analysis and Allocation step within the Systems Engineering Process.
9. Apply the Synthesis step within the Systems Engineering Process.
10. Apply the verification loop in the Systems Engineering Process.
11. Given access to a system acquisition, correctly assess the Systems Engineering Process outputs.
12. Develop a Work Breakdown Structure (WBS) based on a previously developed physical architecture.
13. Given a Statement of Work (SOW), critique its preparation, structure, and content.
14. Identify the concepts of Cost As an Independent Variable (CAIV), Life-Cycle Cost (LCC), and their relationship as outlined in DoDD 5000.1 and DoD 5000.2-R.
15. Given access to a system acquisition, propose a trade study methodology, conduct an analysis, and provide rationale.
16. Distinguish between the various types of "ilities" and their application within the Systems Engineering Process by the Integrated Product Team.
17. Relate the role and interrelationships of Configuration Management, Interface Management, and Data Management to the Systems Engineering Process.
18. Conduct a risk assessment and apply the methodologies for risk mitigation.

SYS 201	Intermediate Systems Planning, Research, Development and Engineering (Continued)

Terminal Learning Objectives/Competencies:

19. Given access to a system acquisition, identify Measures of Effectiveness (MOEs)/Measures of Performance (MOPs) and select the critical MOPs from a given system description of requirements as Technical Performance Measures (TPMs).
20. Plan and execute a technical review.
21. Given access to a system acquisition, analyze problems associated with a product improvement, recommend steps to avoid problems, and provide feasible solutions.
22. Distinguish the major statutory/regulatory provisions of environmental, safety, and health impacts on the systems acquisition life cycle.

SYS 301	Advanced Systems Planning, Research, Development and Engineering Course

Terminal Learning Objectives/Competencies

1. Given completion of this block, the student will be able to identify the policies, interactions, relationships, and impacts which characterize the SPRDE function and its relationship with the 5000-series-managed acquisition life cycle.
2. Apply systems analysis and control tools, employing an Integrated Product and Process Development approach to systems engineering management.
3. Evaluate Organization, Communication and Teaming techniques that facilitate Integrated Product and Process Development
4. Demonstrate understanding of and apply technology to create and augment Defense Capabilities. The SPRDE Manager needs to apply the science and technology base to solve military problems and create opportunities and options.
5. Evaluate the effective execution of the entire Concept Exploration (CE) phase using the systems engineering process
6. Apply acquisition reform initiatives in the development of the solicitation and source selection evaluation process that support the technical goals and address SPRDE management issues**.**
7. Identify the modeling & simulation requirements, benefits, pitfalls, planning and applications in systems acquisition.
8. Given a case study and appropriate references, for the students to Evaluate the Program Definition & Risk Reduction Phase issues, products and processes using the systems engineering process and tools.
9. Evaluate the Systems Engineering product and processes used during the Engineering & Manufacturing Development Phase.
10. Given an acquisition example or situation, for the student to identify the major statutory/regulatory provisions of environmental, safety, and health impacts on the systems acquisition life cycle.
11. Evaluate use of the systems engineering process to monitor and control the system configuration, support the production process, and control the program cost and schedule.
12. Given a case study, students will be able to evaluate the use of the systems engineering process to reduce risk of operational/support problems, as well as plan and monitor the fielding process.
13. Given a case and appropriate references, select practical courses of action to achieve improved performance, cost or safety in weapon systems by taking advantage of new technologies. The problems of modifying existing systems and the methodologies which permit achieving successful modification will be identified and discussed.

SYS 301	**Advanced Systems Planning, Research, Development and Engineering Course**

Terminal Learning Objectives/Competencies, continued

14. Analyze the benefits and pitfalls in international acquisition from a SPRDE manager's perspective.
15. For students to evaluate ethical behavior.
16. Go into greater depth in a current SPRDE problem(s). This can be a subject that was covered in class and or brought from project offices.

TST 101	Introduction to Acquisition Workforce Test and Evaluation

Terminal Learning Objectives/Competencies

1. Given lecture and discussion, the student should be able to identify the major test and evaluation activities/topics and key OSD test and evaluation offices involved during the phases and milestones of the system acquisition process.
2. Given lecture and discussion, the student should be able to correctly summarize the five key steps of the Test & Evaluation process.
3. Given lecture and discussion, the student should be able to predict the impact of Logistics Test and Evaluation in the acquisition process.
4. Given a combat scenario with appropriate performance parameters (Pk, Ph, Survivability, speed, range, maneuvering capabilities, etc.), the student should be able to demonstrate the principles of modeling and simulation.
5. Given lecture and discussion, the student should be able to identify the role of T&E in the software development process.
6. Given approved requirements documents, such as the MNS (Mission Need Statement), ORD (Operational Requirements Document), STA (Systems Threat Assessment), AoA (Analysis of Alternatives), Contract Statement of Work (SOW), and technical specifications, the student should be able to describe the linkage of TEMPs to detailed test plans.
7. Given lecture and discussion, the student should be able to summarize the three step process for conducting tests.
8. Given lecture and discussion, the student should be able to select the appropriate data analysis and evaluation techniques and processes for a given set of data.
9. Given lecture and discussion, the student should be able to identify the elements of a test report.

TST 202	Intermediate Test and Evaluation Course

Terminal Learning Objectives/Competencies:

1. Given a scenario, the student will be able to correctly select a Test & Evaluation strategy for alternative acquisitions, such as Non-Developmental Items (NDI), Commercial Items and non-traditional acquisitions such as Advanced Concept Technology Demonstrations (ACTDs)

2. Given a scenario, the student will be able to correctly assess potential sources of variability, their causes, typical magnitudes and the potential impact that the variability has on system evaluation.

3. Given a typical set of test data, the student will be able to correctly compute measures of central tendency and dispersion and relate these to selected points on the cumulative normal distribution and cumulative t-distribution.

4. Given a scenario, a typical set of test data and summary statistics, the student will be able to correctly draw inferences about the probability of a test system meeting performance requirements.

5. Given a scenario, the student will be able to correctly select an appropriate approach to use in designing an experiment for DT&E or OT&E.

6. Given a scenario, the student will be able to correctly apply the appropriate analytical tool for a statistically valid availability assessment.

7. Given a scenario, the student will be able to correctly conclude the appropriate course of action to comply with developmental and operational T&E requirements in the conduct of test and evaluation.

8. Given a scenario, the student will be able to develop the elements of an operational evaluation plan for a new defense system.

9. Given a scenario, the student will be able to correctly relate the appropriate principles for the test and evaluation of the HSI aspects of the new system.

10. Apply instrumentation planning techniques throughout the test and evaluation process for a variety of weapon system development programs.

11. Given a notional Mission Needs Statement (MNS), the student will be able to

correctly develop: (1) a representative set of requirements documents and; p (2) based on those system requirements, developmental and operational test and evaluation plans.

12. Given a scenario, the student will be able to correctly select an appropriate strategy for planning and conducting live fire T&E on a weapons system.

13. Given a scenario, the student will be able to correctly assess the role of the T&E professional in developing a comprehensive evaluation strategy using the modeling and simulation principles of STEP.

14. Given a scenario, the student will be able to correctly apply the appropriate analytical tools for a statistically valid maintainability assessment.

15. Given a scenario, the student will be able to develop the elements of a TEMP in an IPT environment in accordance with DoD Regulation 5000.2-R.

16. Given a scenario, the student will be able to correctly apply the appropriate analytical tool for a statistically valid reliability test plan.

17. Given acquisition requirements documentation, the student will be able to correctly develop test issues for the TEMP and test plans.
    [ELOs123]
18. Given a scenario, the student will be able to correctly develop selected portions of Part V of the TEMP.
    [ELOs124]
19. Given a scenario, the student will be able to correctly distinguish the roles that test and evaluation plays in the IPPD and systems engineering process.
    [ELOs125]
20. Given a scenario, the student will be able to correctly identify the considerations and appropriate tools, processes and procedures required to conduct software test and evaluation.
    [ELOs126]
21. Given representative acquisition and test documents from the Self Propelled Howitzer Weapon (SPAW) materiel acquisition program, students will work in groups to correctly summarize the translation of system requirements into developmental and operations test and evaluation plans.
    [ELOs127]
22. Given representative acquisition and test documents from the Self Propelled Howitzer Weapon (SPAW) materiel acquisition program, students will continue to translate system requirements into test design and test scenarios.

[ELOs128]

TST 301	Advanced Test & Evaluation Course

Terminal Learning Objectives/Competencies:

1. Given recent revisions to the DoD 5000 series and acquisition reform initiatives impacting T&E managers, the student will appraise the potential impact on their organization.

2. Provided specific issues and a scenario, the student will analyze the impact of material development alternatives on T&E.

3. Given a scenario dealing with analysis of performance comparisons in test and evaluation, the student will be able to correctly evaluate the validity of the approach recommended or used with regard to: the expected statistical confidence and; the presence of common pitfalls associated with some of the usual approaches.

4. Given a scenario, the student will be able to plan for test which, while achieving the overall objectives of the test and evaluation process, recognize the inherent constraints and limitations.

5. Given a scenario, the student will be able to recommend a solution to data management issues within the operational constraints and evaluation requirements of an acquisition program.

6. Given a scenario and current environmental protection policies, the student will recommend an appropriate course of action for a test and evaluation program.

7. Given a scenario, the student will be able to correctly recommend solutions associated with the test and evaluation of the HSI aspects of a new system.

8. Given recent revisions to the DoD 5000 series and acquisition reform initiatives impacting T&E managers, the student will appraise the potential impact on their organization.

9. Given a scenario, the student will be able to correctly identify the required LFT&E procedure for a system, to include whether the system is covered by the LFT&E statutes.

10. Given a scenario, the student will be able to correctly assess the potential application and implementation issues associated with the use of modeling and simulation in support of T&E for system acquisition.

11. Given elements of a T&E plan from a TEMP and a scenario, the students will be able to correctly evaluate the plan for potential impacts on their ability to resource, execute, and analyze the results of the test.

TST 301	Advanced Test & Evaluation Course

12. Given a scenario, the student will be able to correctly recommend a test reporting approach which accurately reflects the facts, within the constraints imposed by outside higher authorities.

13. Provided cases scenarios, the student will correctly analyze the impact that the requirements definition issues have on T&E planning and execution.

14. Given a scenario, the student will be able to correctly recommend solutions to resource issues associated with T&E for a system.

15. Given a scenario, the student will be able to correctly recommend techniques and resources required to conduct software T&E of a system.

16. Given a system and test scenario, the student will be able to assess appropriate procedures in the test and evaluation of suitability parameters.

17. Given a scenario, correctly apply the principles of IPTs to the management process for a test and evaluation program.

18. Given an issue to be addressed at the OSD level, and a response from senior OSD T&E officials, the student will be able to correctly assess the impact on a specified test and evaluation program.

DEFENSE ACQUISITION UNIVERSITY (DAU)
and
AMERICAN COUNCIL ON EDUCATION

COURSE EQUIVALENCY PROGRAM PROCESS

January 13, 2000

All applications from requesting organizations will be processed by Defense Acquisition University, Norfolk Campus (DAU/Norfolk) in the order received. Course equivalencies will last for two years and DAU/Norfolk will manage the re-certification process. The table below lists the steps to administer the program.

Step	Process	Expected Completion
1.	The organization contacts DAU/Norfolk requesting equivalency to DAU courses.	At organization's discretion
2.	DAU/Norfolk directs requesting organization to the DAU Website. This Website, provides the DAU Course Performance Outcomes Guide and Course Catalog Objectives, which gives information to use to answer the questionnaire and conduct the side-by-side analysis. To access the documents, the web address is http://www.acq.osd.mil/dau. Click on Training. DAU Equivalency Program is the first button.	At organization's discretion
3.	Organization conducts side-by-side analysis of courses, comparing performance outcomes, and course objectives of the DAU course to the proposed equivalent course, completes questionnaire, and forwards package, with all course materials, to DAU/Norfolk.	At organization's discretion
4.	DAU/Norfolk reviews package for completeness and forwards to DAU Course Manager. (The package consists of completed Questionnaire, Course Syllabus, Analysis Checklist, and any additional supporting material.)	3 weeks from receipt of materials
5.	DAU Course Manager reviews submission and provides results to DAU/Norfolk.	6 weeks
6.	DAU/Norfolk notifies DAU President of results on the equivalency review.	1 week
7.	DAU President notifies organization of results with copy to DAU/Norfolk.	1 week
8.	DAU notifies DACMs and publishes equivalencies on DAU Website and DAU Course Catalog.	1 week

DAU Course Equivalency Questionnaire

Please complete a separate questionnaire for each course to be considered for equivalent status.

Name of Organization_____

Address_____

_____

_____

Name and Title of Institution's Contact Person

_____

_____

Telephone_____ **Fax** _____ **E-mail**_____

What is the current accreditation rating for this course? Please check appropriate ____Undergraduate ___Graduate Credit Hours___ or Quarter Credit Hours___

Who is the accrediting agency?_____

College or University Course Number and Title for requested Equivalency

_____

Corresponding DAU Course Number and Title_____

Course Length (weeks)_____

Total Classroom Hours_____

Course Prerequisites

_____

_____

_____

_____

Name all Related Degree or Certificate Program

_____

_____

_____

COURSE OBJECTIVES

1. **Describe the expected learning outcomes and objectives for the course in terms of skills and knowledge.**

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2. How does the student demonstrate that he/she has achieved the performance level required in the course (both skills and knowledge)?

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COURSE CONTENT

3. List major subject matter areas as they relate to the course objectives.

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4. Using the above response, demonstrate the equivalency of your learning outcomes and objectives to the DAU course learning outcomes and objectives. (You may use attachments.)

_____

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5. Explain how the course is kept current.

_____

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_____

TEACHING METHODS AND MATERIALS

6. Attach a copy of the course syllabus or plan of instruction showing:

Course outline

Teaching methodologies

Specific materials used (e.g., textbooks, student handbooks and materials, audio visual, and supplementary readings)

Note: Include all course materials with your submission package.

STUDENT ASSESSMENT

7. Describe the methods used to evaluate student accomplishment (e.g., assignments, exams, etc.) Attach copies of course tests or other assessment tools.

_____

_____

_____

FACULTY

8. List the faculty who teach the course and their qualifications. (Attach copies of their vitae showing education, training, and experience in the field.)

_____

_____

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EVALUATION OF COURSE AND FACULTY

9. Describe institution's methods for course evaluation. Please provide examples.

_____

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10. Describe institution's criteria for evaluating faculty.

_____

_____

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_____

11. Describe the means of assuring that faculty stay current in his or her subject area.

_____

DAU CHECKLIST FOR EVALUATING COURSE

EQUIVALENCY REQUESTS

For all "No" responses, please cite the item number and provide an explanation.

Evaluation Criteria	Yes	No
1. Learning objectives/performance outcomes are stated in measurable and observable terms.		
2. Learning objectives/performance outcomes correspond to knowledge and skills required to perform the task.		
3. Lesson content and exercise activities match the objectives.		
4. Handouts, Films, Overhead, and other media support learning objectives/performance outcomes and course content.		
5. Text materials appropriately address course objectives and are a useful reference for lesson/course.		
6. Test questions or other assessment tools are based on, or tracked, to course objectives.		
7. Course content organized and sequenced logically.		
8. Instructional methods reflect the appropriate learning level as reflected in the learning objectives/outcomes.		
9. Time allocated for exercises, discussions, lecture, etc., is appropriate.		
10. Exercises are appropriate for level of material covered.		
11. Measure of student performance has an established criteria or standard.		
12. Methods used to evaluate student accomplishment, assignments, exams, etc. are acceptable.		
13. Instructor guide corresponds to the skill and knowledge required for course and cites current applicable doctrine (i.e., regulations, DoD directives, pamphlets, etc.)		
14. Course materials are in support of current doctrine.		
15. Method for ensuring currency and accuracy of course is adequate.		
16. Methods used to evaluate course are satisfactory.		

17. Qualified faculty teach the course.		
18. Criteria for evaluating faculty is appropriate.		
19. Means of assuring that faculty stay current in the subject area are appropriate.		

Signature of Evaluator _____ Date_____